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Adult Texting In Context:
Exploring Norms for Mature Users of Text-Messaging Technologies

A thesis
presented to
the faculty of the Department of Sociology
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Master of Arts in Sociology

by
Angela M. Barlow
December 2008

Dr. Martha Copp, Chair
Dr. Leslie McCallister
Dr. Melissa Schrift

Keywords: adults, texting, text-messaging, communication

ABSTRACT

Adult Texting In Context:

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by

Angela M. Barlow

An online survey exploring the patterns of adult text-message use was completed by 150 traditional college age young adults ages 18-24 and 171 adults ages 25-68. Because youth traditionally are among the first group to adopt new communication technologies, much research has been conducted among the adolescent and young adult population regarding the prevalence and importance of text-messaging; however, a research deficit exists regarding adult text-message use. Data gathered from this survey were categorized and analyzed for emergent content regarding the use of text-messaging , what roll texting plays in adult's communication patterns, the sociological impact of text-messaging on survey respondents, and to examine the prevalence of this technology in adults' lives.

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DEDICATION

This thesis is dedicated to my daughter, Kelsea, as a reminder that the possibilities extend beyond the stars, the sun, and the moon.

ACKNOWLEDGMENTS

I would like to extend my appreciation to Betsie Cole for planting the seed, to Dr. Leslie McCallister for textual banter, and teaching me to learn through application, and to Dr. Melissa Schrift for excellent feedback on my writing skills over the years.

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CHAPTER 1

INTRODUCTION

Non-verbal technological communication including e-mail, instant messaging, and mobile text-messaging (texting) have become increasingly prevalent in American culture. Originally, family and friends used texting as a simple means for staying in contact. More recently texting is used for multiple purposes, including as a device used for emergency notification and as a means for relaying information to mass quantities of people. After the Virginia Tech shooting in 2007, universities across the United States employed emergency text notifications to inform students, staff, and faculty of traumatic or dangerous events on campuses and class changes due to inclement weather. The New York City police department has recently begun a crime fighting campaign encouraging citizens to text anonymous crime tips to the police department (Baker 2008). Pharmaceutical and medical research companies have joined the bandwagon as well, employing texting as a means of reminding insulin-dependent children of timetables for injections and encouraging medical trial participants to report information throughout the day via texting (Davis and Hughes 2008).

While texting evolves for informational purposes, the technology is more frequently used as a personal means of communication. Because youth traditionally are among the first group to adopt new communication technologies, much research has been conducted among the adolescent and young adult population regarding the prevalence and importance of texting. Research reveals that youth use text-messaging because it enables them to have instant reciprocal conversation when in separate physical locations (Grinter and Eldridge 2001; Horstmanshof and Power 2005; Thurlow and McKay 2003). Youth also use texting as a means to maintain relationships with friends and acquaintances (Bryant, Sanders-Jackson, and Smallwood 2006;

Grinter and Eldridge 2001; 2003; Horstmanshof and Power 2005; Ishii 2006; Taylor and Harper 2003; Thurlow 2001; Thurlow and McKay 2003). Because current texting research focuses almost exclusively on youth (ages 13-17), and young adults (18-24), this study explores the patterns among adult text-message users over the age of 24. An online text-messaging survey was developed and used for this study. Data were then categorized and analyzed for emergent content regarding the use of texting and the prevalence of this technology in adults' lives.

CHAPTER 2

REVIEW OF CURRENT LITERATURE

Social scientists are increasingly considering alternative forms of communication such as Short-Message Systems (SMS) or texting as worthy of investigation. Texting became popular in Europe a few years earlier than in the U.S. primarily due to the higher cost in the states. As such, most of the early texting research reviewed for this study was conducted in Europe. A review of the literature on “text-messaging” yields a substantial number of studies that focus specifically on youth or adolescent text-message use. Several studies included pre-teen and young teen participants (Bryant et al. 2006; Grinter and Eldridge 2001; 2003), while the majority of studies involved participants in their late teens and early twenties (Horstmanshof and Power 2005; Ito and Okabe 2005; Taylor and Harper 2003; Thurlow 2001; Thurlow and McKay 2003). This demographic is ideal for studying texting, primarily because of the prevalence of mobile phones. For example, Ling (2002) found that 77 percent of 14-16 year-olds in Britain have mobile phones. This study also identified the ‘young adult/older teenager’ demographic as the heaviest text users in the mobile-saturated country of Norway. In addition, Thurlow and McKay (2003) assert that teenagers’ intense concern with maintaining relationships through adopting new technologies makes the teen demographic particularly useful for studying text-message use.

Themes in Youth and Young Adult Texting

Several common themes emerged in youth and adolescent text research including explanations regarding the allowable length of each text message on the SMS system. SMS systems have a 160 character limit, yet Horstmanshof and Power (2005) found the average length of text-messages in their study to be 61 characters. Grinter and Eldridge (2001) found the average number of texts exchanged to be six per day. As this study was conducted in 2000, it is

worth considering the possibility that as text-messaging becomes more popular, more affordable, and more accessible, the frequency and number of text-messages exchanged will greatly increase.

A second area of research explored social norms associated with text-messaging. Texting allows almost instant communication between users and requires each user to be versed in the etiquette of text. For example, there is an “expectation of reciprocation,” meaning, youth text users expect text-messages to be returned until a mutual ending has been established; leaving the other person “hanging” constitutes a breach of texting norms. Once these norms are learned, users can enjoy sharing the same social space and social culture even when physically removed from each other’s presence (Horstmanshof and Power 2005; Taylor and Harper 2003).

Another emergent theme among adolescent text-messaging research was the perceived negative effects of teens adopting new technology. Several researchers note that the common belief that youth are destroying standard or ‘traditional’ linguistic practices through use of new communication technology (including online chat rooms, instant messaging, and text-messaging), is largely unsubstantiated (Grinter and Eldridge 2001; Horstmanshof and Power 2005; Ito and Okabe 2005; Taylor and Harper 2003; Thurlow 2001; Thurlow and McKay 2003). Thurlow and McKay (2001) state that “characterizations about ‘youth culture’ are often impressionistic and oversimplistic” and claimed that teens are often accused of reinventing the English language with slang. In later research they revealed information contradicting those popular characterizations: out of 544 messages, less than 20 percent of message content included abbreviations, acronyms, and non-conventional spellings (Thurlow and McKay 2003). These findings challenge the belief that teens’ adoption of new communication technologies destroys traditional linguistic practices. Linguist, David Crystal, agrees that texting is not corrupting

language. He asserts that initialisms and shorthand have been widely used throughout the history of language (e.g. “appt” for appointment, and “R.S.V.P”), and despite this use of shortened text, people are perfectly capable of spelling the actual words (Crystal 2008).

The most prevalent theme in adolescent text-messaging research discussed adolescents’ use of text-messaging as a means of maintaining relationships and social networks (Bryant et al. 2006; Grinter and Eldridge 2001; 2003; Horstmanshof and Power 2005; Ishii 2006; Krause et al. 2004; Taylor and Harper 2003; Thurlow 2001; Thurlow and McKay 2003). Thurlow (2001) found that 61 percent of text messages fell into intimate and relational categories. In this study, 135 British students who used text-messaging were required to transcribe text messages stored in their cell phones. The messages were then categorized into one of nine different themes, including practical and relational informative texts, practical and social arrangements, friendship maintenance (i.e. apologies, support, thanks), romantic, sexual, and emphatic (non-specific and brief) messages. The majority of messages were categorized as “high intimacy and high relational” as opposed to “low intimacy and high transactional.” While examining the relationship maintenance of teenagers through text-messaging, Grinter and Eldridge (2001) discovered that 90 percent of their participants’ text messages were sent to and received from friends.

Multiple methods were used in the above-described studies, including pre-study questionnaires, observational field notes, and participants keeping written logs and diaries of their text-messages. The most common method, often due to the small number of participants, was focus groups. Taylor and Harper (2003) conducted eight separate focus groups consisting of six 16-19 year old participants. The purpose of these focus groups was to conduct exploratory research, including unveiling attitudes about new cellular communication technologies and

gathering insights into the “social practices, socially constituted values, norms and obligations” associated with this technology (p. 269). Because direct observation of teens’ texting practices at home and school is impractical, Grinter and Eldridge implemented a logging technique in their 2001 study to elicit detailed information about teen text-messaging. The logging study requested teens to record sent and received text messages for seven consecutive days, and they were asked to code the messages according to content, length, and purpose of message. For clarification and validity, the logging process was followed up with two focus groups of five persons each. Horstmanshof and Power (2005) also implemented focus group interviews for collection of data, with five groups comprised of 20 participants. The researchers stressed that using focus groups allowed the participants to “reveal their own perceptions and to provide a rich understanding of their appropriation of the technology and their relationship to it” (p. 36). In addition, Lederman (1990) asserts that synergy created through group interviews provides rich data and provides details into people’s shared understandings of everyday life.

Recent Texting Trends

Journalists and marketing research firms have also joined the texting bandwagon by publishing numerous articles regarding other uses for text messaging. One (non-scientific) study reports that text-messaging could revolutionize subject recruitment and compliance in clinical trials. They also report that healthcare and pharmaceutical companies are using text-message appointment reminders (Davis and Hughes 2008). Virgin Mobile, a cellular carrier in the United Kingdom, sponsored a text messaging survey that found a 38 percent increase in the number of repetitive strain injuries (RSI) to thumbs, wrists, and fingers reported in comparison to five years ago. The assumption is that the increase in text-messaging over the last five years is responsible for the increase in RSI cases.

Cellular phone companies have become increasingly aware of the popularity of texting and have recently begun investigating the impact of this technology. Two cellular companies, Cingular Wireless and Samsung Mobile, hired marketing research firms to conduct studies focusing on the impact of text-messaging on family communications. Samsung claims that their research reveals “text-messaging has broadened the lines of communication for many parents and teens, with over half of those reporting it has actually improved their relationship” (Text 2008). Cingular reports similar findings and reports that 63 percent of parents who text believe it actually improves relationships with their children (TXT2CONNECT 2006). They report that nearly half of parental respondents who text claim to have been taught to text by their children. As a result of this study, Cingular teamed with psychologist Ruth Peters to develop a tutorial website to teach parents how to text and to offer parents tips on how to better communicate with their children via texting.

Literature Shortcomings

Younger individuals are traditionally more likely to adopt new technologies. Older generations adopt later as the technology ‘trickles up’ through reverse socialization or as they are forced to begin use due to the prevalence of the new technology. It is my assumption that these common beliefs about teenagers dominating the use of new communication technology—specifically text-messaging—has discouraged exploring adult texting patterns. Only one academic study discussed the possibility of adult text use; this study, however, was limited by a small sample size and a lack of discussion about adults’ use patterns and opinions about the technology (Ito and Okabe 2005). While examining teen text-messaging use, Grinter and Eldridge (2001) found that teens employ texting to coordinate events with parents, but the study fails to elaborate on parental use. Despite marketing research firms’ interest in texting, the scarcity of

peer-reviewed research examining adult text-messaging has led me to focus my research exclusively on adult texting patterns and use. A contrast and comparison of adult and young adult text-message use is addressed in my research.

CHAPTER 3

METHODOLOGY

The purpose of this study is to compare adult text-message use with that of the adolescent/young adult text-messaging population, to determine what roll texting plays in adult's communication patterns, and to examine the sociological impact of text-messaging on survey respondents. This study is largely focused on male and female adult text users over the age of 24, and is compared to data collected from traditional college-age students ages 18-24. The age boundaries are structured to simulate the young adult/college-age studies used in previous texting research and to include the largest percentage of adults over the age of 24.

Web-Based Surveys

This study employed an exclusively web-based (online) survey for data collection. Previous literature on web-based survey methods found several advantages to administering surveys online including a significant reduction in cost over telephone, personal interview, and mail surveys; ease of processing and analyzing data (data are easily saved in files that transfer directly into Excel or SPSS for analysis); flexible survey construction; and immediate receipt of completed surveys (Ardalan et al. 2007; Britto 2004; Smith and Williams 2007).

In their 2005 study, Parks, Pardi, and Bradizza (2006) found that completing surveys online may reduce bias due to less pressure to produce socially desirable responses. This study also compared completion rates between telephone surveys and web-based surveys; the completion rate was significantly higher (60%) for the web-based survey than for the telephone survey (45%). Because web-based surveys can be completed at home and on the respondents' own time schedule, they increase respondents' *perception* of anonymity (Ardalan et al., 2007; Parks et al. 2006), which may also increase response rates. Potential drawbacks for participants

in web-based surveys include technical malfunctions and a lack of understanding about navigating online surveys.

Participants in web-based surveys must have Internet access and a basic level of computer literacy (Dillman, Tortora, and Bowker 1998b). Non-response is a concern with web-based surveys because not all households have the Internet, but the latest data from the Pew American Life Project shows that 73 percent of adults use the Internet (Pew Internet 2008). The Pew Internet and American Life Project conducted April 8-May 11, 2008 interviewed over 2000 American adults by telephone and online to collect data about current technology trends in America including who uses the Internet. Table 1 depicts the demographic breakdown of current Internet users. Although Internet use is still dominated by urban and suburban users with at least some college education, the trends are changing. Eighty percent of English-speaking Hispanics in America use the Internet, compared with 75 percent of White/Caucasian residents, and 58 percent of Black/African American residents. Men and women are equally as likely to use the Internet (73% of both). Persons with less than a high school education, those with household incomes of less than \$30,000, and those over the age of 65, are the slowest growing demographic groups to use the internet, and may be under-represented in web-based surveys (Pew Internet 2008).

Despite the slower growing groups, the growth of Internet use and the prevalence of this technology increase the feasibility of collecting web-based data. For more representative samples, web-based surveys could be paired with other methods of data collection that target populations under-represented in web-based surveys.

Table 1. Demographics of Internet Users

<i>Total</i>	<i>Use the Internet</i>
Total adults	73%
<i>Gender</i>	
Women	73%
Men	73%
<i>Age</i>	
18-29	90%
30-49	85%
50-64	70%
65+	35%
<i>Race/Ethnicity</i>	
White, Non-Hispanic	75%
Black, Non-Hispanic	59%
English-speaking Hispanic	80%
<i>Geography</i>	
Urban	74%
Suburban	77%
Rural	63%
<i>Household Income</i>	
Less than \$30,000/yr	53%
\$30,000-\$49,999	76%
\$50,000-\$74,999	85%
\$75,000 +	95%
<i>Educational Attainment</i>	
Less than High School	44%
High School	63%
Some College	84%
College +	91%

Source: Pew Internet (2008). N=2,251 adults 18 and older. Margin of error is $\pm 2\%$ for results based on the full sample and $\pm 3\%$ for Internet users

Participant Recruitment

The majority of survey participants were recruited in Johnson City, Tennessee, a Southern Appalachian college town with a population of approximately 62,000 residents. East Tennessee State University (ETSU) is located in Johnson City and was one of the host sites for this study. ETSU's psychology department manages a Sona Systems participant pool that is used to conduct research, solicit participation in research studies, and award extra credit points to students enrolled in introductory psychology courses as compensation for participants' time. The researcher made the Barlow Text-messaging Questionnaire available in the Sona online study system; students could then sign up for the study and receive minimal extra credit points applicable to their psychology courses.

Because the researcher was interested in comparing text-messaging norms for adults over the age of 24 with those 18-24, additional extra credit was given to any student who recruited adult friends or relatives ages 25 and older (including siblings, parents, grandparents, extended relatives, and older adult friends) to participate in the text-messaging survey. Each participant was assigned an I.D. number through the Sona system, thereby ensuring participant anonymity. One hundred eighty participants, 111 in the 18-24 traditional college age group, and 69 adults age 25 and older, were gathered through the Sona participant pool.

An additional 141 participants were gathered through word of mouth and snowball sampling. The researcher's brother sent a mass email to his coworkers at a factory located in Middle Tennessee asking for voluntary participants. Several of the researcher's friends also gathered voluntary participants from all over the Southeastern United States. Table 2 depicts the total number participants recruited by both methods broken down by traditional college age (18-24) vs. non-traditional college age adults (those 25 and older). The final count was 151

participants ages 18 to 24 and 170 participants ages 25 to 68, with a total of 321 survey respondents.

Table 2. Method of Recruitment by Age Group

<i>Method of Recruitment</i>	<i>Sona Percent</i>	<i>Snowball Percent</i>
Age		
18-24	34.5	12.4
25 and older	21.4	31.7
Total	55.9	44.1

Participant Demographics

A shortcoming of this sample was the lack of racial diversity. Ninety-four percent of participants reported belonging to the White/European American category. The balance of respondents included 2 percent American Indian, 1.4 percent African American/Black, and less than 1 percent each Asian American, Hispanic American, and Bi/Multi-racial American participants. Three respondents reported being a citizen of a foreign country. Although the racial composition of the sample obtained is representative of the East Tennessee area, a more diverse population would have been preferable for this study.

The gender composition of the sample was highly skewed, with female respondents represented nearly three to one compared to male respondents. Table 3 depicts the gender of participants categorized by the method of recruitment for the study. Of the 18-24 year old participants recruited through the Sona system, women were more than twice as likely to respond than men. This response is comparable to that found in other Sona studies and is representative of the gender composition of students in introductory psychology courses. Of the participants 25 and older recruited as extra credit through the Sona system, women were more than three times

as likely to respond than men. We could speculate that female college students generally have more contact with mothers and were more likely to recruit mothers to participate in the survey.

Table 3. Participant Gender by Method of Recruitment

<i>Sona Participants Gender</i>	<i>Female</i>	<i>Male</i>
	Percent	Percent
18-24	70.3	29.7
25 and older	78.3	21.7
Total Sona	73.3	26.7
<i>Snowball Participants Gender</i>	<i>Female</i>	<i>Male</i>
	Percent	Percent
18-24	82.5	17.5
25 and older	66.7	33.3
Total Snowball	71.1	28.9

Similar to the gender composition of sona respondents, women in the 25 and older age group who were recruited through snowball method were twice as likely to participate than men in that same age group. The majority of word-of-mouth respondents were gathered from a factory in Middle Tennessee. It was later discovered that the age and gender composition of the participants in the snowball sample were representative of the gender and age composition of the factory employees.

Table 4 depicts the demographic breakdown of individuals who responded to the survey, using age, education, and income as demographic variables. The participants in this sample are more educated than the general population in the East Tennessee area, and therefore the sample is not representative with regard to education. Ninety-five percent of respondents are currently enrolled in college or have some college education. Of the 299 participants who reported their level of education, 41 percent hold at least a bachelor's degree, with 16 percent of those having also completed graduate or professional school.

Table 4. Demographic Data for Respondents

<i>Age Group of Respondents</i>	<i>Frequency</i>	<i>Percentage</i>
18-24	150	46.7
25-29	32	10.0
30-39	52	16.2
40-49	43	13.4
50-59	34	10.6
60 and older	10	3.1

<i>Education</i>	<i>Frequency</i>	<i>Percentage</i>
High School Grad or G.E.D.	17	5.7
Some College	159	53.2
College Graduate	57	19.1
Some Grad/Professional School	17	5.7
Completed Grad/Prof. School	49	16.4

<i>Household Income</i>	<i>Frequency</i>	<i>Percentage</i>
Less than \$15,000	22	7.7
\$15,000-\$24,999	20	7.0
\$25,000-\$49,999	64	22.5
\$50,000-\$74,999	82	28.9
\$75,000-\$100,000	46	16.2
Over \$100,000	50	17.7

Survey participants reported a median household income of between \$50,000 and \$74,999 which is much higher than the median income of \$30,835 for Johnson City households (Census Bureau 2000). Two factors may influence this: first, 18-24 year old college students may be reporting their parents' household incomes and, second, income is generally positively associated with education; the large number of respondents with master's and professional degrees may have skewed the income data for this study.

Questionnaire Construction

The purpose of this questionnaire is to gather information regarding adults' use of texting and their perceptions of the technology. The Quillen College of Medicine associated with ETSU provides an online questionnaire development software package and server that graduate students and faculty may use free of charge. The Barlow Text-messaging Questionnaire was developed online using this software.

This 58-item texting survey with built in skip patterns consists of 8 demographic questions, 5 short answer questions, 4 questions in which the respondent is asked to check all relevant answers, 40 single choice questions, and 5 open-ended/descriptive response questions (see Appendix C). The demographic questions ask for age, gender, race, marital status, education, household income, current occupational status, and specific occupation. The single choice questions address the mechanics of texting in order to gain an understanding of people's comfort level with the technology. Respondents were asked whether or not they must look at the keyboard when they text, if they tend to use abbreviations or whole words, and if they use punctuation. Data were also gathered to determine how frequently people text and if they have a limited or unlimited text-messaging plan with their cellular carrier.

Other questions were intended to gather information about whether or not, or how fully, texting has become part of the respondents' social environment. Respondents were asked with whom and how often they text, if friends and family members text, and in what situations/under what circumstances they choose to text. Because texting is so prevalent in youth culture, it is important to explore perceptions of how acceptable it is to text in social situations. Specifics were asked, including whether people text at work, at church, during meals or conversations, if they tend to text more while intoxicated, and if they text while driving. Information measuring

respondents' perceptions of other people's use of text-messaging was also gathered, including if they think women or men tend to text more, if they think people can "cheat" on each other through text-messaging, and whether or not they believe a negative stigma exists against people over 40 using text-messaging.

The open-ended questions focused less on the physical aspects of texting and explored each individual's reasons for incorporating text-messaging into her or his methods of communication. More specifically, these questions were designed to explore how respondents *feel* (emotionally) about text-messaging. One question asked for details regarding the benefits or drawbacks of text-messaging over voice conversations; another question asked for the specific reasons people choose to text-message rather than talk to others. Perceptions of text-messaging etiquette including whether or not a mutual ending should be established before discontinuing a conversation and how people feel about using text-messaging as a tool to avoid having voice conversations were also queried. These open-ended questions allowed respondents to explain the underlying meanings they attach to their texting behavior. Answers from both the open-ended and single choice questions contributed to a more thorough examination of the impact of this technology on respondents' lives.

Data Collection

Students enrolled in introductory psychology courses at ETSU are encouraged to log into the Sona system and participate in online surveys being conducted at the university in exchange for extra credit. The text-messaging questionnaire was available for a six-week period during the months of April and May of 2008. Because many students wait until the end of the semester to assess whether or not they need extra credit points, the majority of surveys completed through the Sona system were collected during the last two weeks of the semester. When students log

into the Sona system, all available surveys are randomly listed. During the time the text-messaging questionnaire was available, there were between 12 and 15 active surveys. Each time the survey page is accessed the listed surveys are randomly scrambled to ensure each survey has an equal chance of being selected. The students can then choose the survey(s) in which they would like to take part. Once Sona participants chose the link to the text-messaging questionnaire, they were directly routed to the Quillen College of Medicine server.

Participants recruited through word or mouth and snowball sampling accessed the text-messaging questionnaire through a web-page (www.textmessagingssurvey.com) explaining the purpose of the survey. This page provided a direct link to the Barlow Text-messaging Questionnaire located in the Quillen College of Medicine server.

Ethics

In an effort to protect participants' rights, the researcher was required by the ETSU Institutional Review Board (IRB) to provide a statement about the purpose of this research. This statement informed respondents that participants must be at least 18 years old, that they are not required to participate and may terminate participation at any time, and that there are no known risks or benefits to participating in this research. An additional statement was included reminding participants that the survey is anonymous and the information confidential. Participants were informed that continuing with the questionnaire served as informed consent to participate in the study.

Privacy is a potential benefit of web-based surveys. Participants can choose the time and place of participation—often within the privacy of their own home—and may take as long as necessary to complete the survey. The Quillen College of Medicine server included an option for participants to save their current answers if necessary and resume the survey at a more

convenient time. Contrary to telephone or face-to-face interviews and to self-administered paper questionnaires, web-based surveys offer greater protection from breach of privacy because respondents' answers cannot be overheard and no paper copy is circulated between researchers and participants.

Working Hypotheses

Because the researcher included several open-ended questions in this study that were examined for emergent themes, working hypotheses were developed in place of formal hypotheses. A working hypothesis is a qualitative concept used when doing inductive research (Geer 1967). It functions as an acknowledgement of 'hunches' about potential findings and allows room for the development of emergent themes. Several working hypotheses were constructed based on the researcher's basic understanding of current cultural trends regarding gender, age, and technology. In contemplating potential differences in text-messaging use by age, the following working hypotheses were developed:

1. As age increases the likelihood of adopting text-messaging will decrease.
2. Text-messaging frequency will decrease as respondent's age increases.
3. Respondents with children who text-message will likely have learned to text from their children.
4. Older respondents will be more likely to look at the keys to text, whereas younger respondents are more likely to have the key pad memorized.
5. The tendency to use full words rather than abbreviations will increase as age increases.
6. Younger respondents will be more likely to text while driving.

Working hypotheses were also developed regarding differences between women's and men's text-message use. These were constructed based on the popular cultural assumption that

men communicate less than women and that men are supposed to express little or no emotions in communication with others, compared to women, who are perceived as *overly* emotional. Based on these cultural conceptions the following working hypotheses were made:

8. Women will send more text-messages than men.
9. Women will be more likely to report using emoticons than will men.
10. Men will be more likely to report text-messaging as a means to avoid having voice conversations.
11. Men will be less likely to report feeling “bothered” by a slow response or no response to a text-message than will women.
12. Women will be more likely to believe a mutual ending must be established before ending a text exchange.

Hypotheses that would have to be studied by examining actual texting behavior and content have been excluded from this thesis. Open-ended data were compiled and categorized for emergent themes, yielding a qualitative analysis of responses. Depending on the type of data collected, several forms of statistical analyses were performed, including cross tabulations, t-tests, and one-way analysis of variance (ANOVA) tests.

CHAPTER 4
RESEARCH FINDINGS

Quantitative Data

Survey results were analyzed with regard to age group and gender. No significant gender differences emerged during analyses of the working hypotheses. Gender was also inconsequential in most of the remaining questions with few gender differences reported. However, significant differences were found in text-messaging use among various ages of respondents. The purpose of this study was to compare texting norms of adults ages 25 and older with those of traditional college age (18-24) adults because prior studies have focused exclusively on college age adults. A majority of the findings in this study contradict the working hypothesis that adults over the age of 25 would have significantly different texting behavior than those found in previous studies with younger age groups. Findings with regard to age will not be presented in a dichotomized format (older texters vs. younger texters), similarities and differences among the actual ages of respondents will be reported instead.

Respondents were asked several questions about their adoption of text-messaging technology including how frequently they use texting and with whom they text. The first working hypothesis, “as age increases the likelihood of adopting texting decreases,” was supported. An independent samples t test confirmed that a significant difference in text-message use exists among ages of respondents ($p < .05$). Over 87 percent of participants report texting, with a mean age of 30 for those who use text and a mean age of 41 for those who do not.

The respondents, on average, sent and received a little over 100 text-messages per month. The second working hypothesis, “text-messaging frequency will decrease as respondent’s age increases,” was also accurate. A one-way analysis of variance (ANOVA) confirms a significant

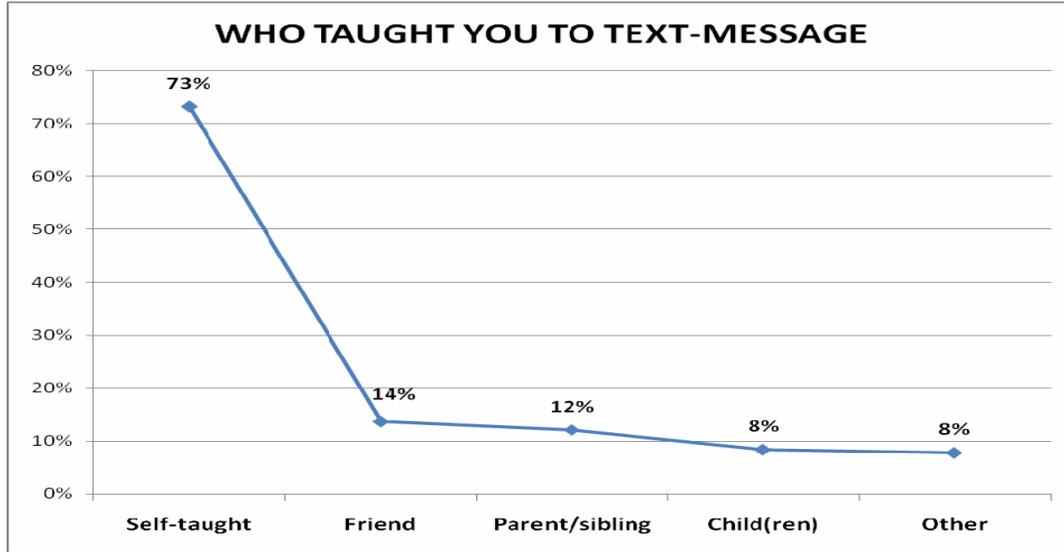
difference in the number of text messages used per month by respondents of different ages ($p < .05$). The results are depicted in Table 5.

Table 5. Monthly Text-Message Use

<i>Number of texts per month</i>	<i>Mean Age</i>	<i>Frequency</i>	<i>Percent of Sample</i>
0-100	36.4	130	50.0
101-499	27.7	26	9.9
500-1000	22.1	44	16.8
1001-3000	22.3	31	11.8
Over 3000	20.6	30	11.5

Respondents were asked to choose which person they text with most frequently. Thirty-nine percent reported texting most frequently with a friend, followed by texting with a girlfriend/boyfriend/spouse (37.1%). Only 12.9 percent of respondents reported texting most frequently with their child, but of those 88.2 percent were women. When asked how they learned to text-message, respondents overwhelmingly reported being “self-taught,” followed by “friends,” “parent/sibling,” and then “child(ren)” or “other.” These findings are depicted in Figure 1. The working hypothesis presumed that respondents with children who text message would most likely have learned to text from their child(ren). This hypothesis was not supported. Only 25 (24.5%) of the 102 respondents who have children who text reported learning to text from their child.

Figure 1. Taught to Text



Respondents were asked several questions about the mechanical aspects of their texting behavior. The working hypothesis was supported: when asked how often it was necessary to look at the keys when composing a text-message, older respondents were more likely to choose “often to always” (mean age 35.1), rather than “sometimes” (mean age 25.8), or “rarely to never” (mean age 23.6). A significant difference between means was confirmed with a one-way ANOVA ($p < .05$). The data did not support the next working hypothesis, that older respondents would be more likely to use full words rather than abbreviations when composing text-messages. The majority of text users, over 55 percent, use mostly full words. Little difference exists among age; respondents of all ages were equally as likely to report using full words instead of abbreviations. When asked how often they used correct punctuation, respondents were equally as likely to choose “rarely to never” as “often to always.” However, the data indicate that younger respondents are slightly more likely to report using correct punctuation than older respondents ($p < .05$).

Over 70 percent of participants report texting “sometimes to often” while driving. The working hypothesis regarding potential age differences presumed that younger respondents would be more likely than older respondents to texting while driving. An independent samples t test supported this hypothesis ($p < .05$), with a mean age of 37.5 for texting “rarely to never” and a mean age of 26.9 for those who text “sometimes to often” while driving.

The researcher was curious as to whether text-messaging “spilled over” into social situations in which it would be considered rude, or at least socially undesirable, to converse with other people. Respondents were asked how frequently they text while at work and at church; they were also asked how frequently they text while having a meal with others and if they text while having a face-to-conversation with another person. Participants were most likely to text while eating with others and while working; respondents were least likely to text while at church.

The researcher was also curious if intoxication affects texting behavior. Respondents were asked if they text while they are intoxicated or under the influence of drugs or alcohol. Of those who report using intoxicants, only 22 percent of respondents report texting “often” or “always” while intoxicated. A one-way ANOVA emphasized a difference in mean age between those who do and do not text while intoxicated: as age decreases, the likelihood of texting while intoxicated increases ($p < .05$). The mean age for response categories are displayed in Table 6.

Table 6. Texting while Intoxicated

<i>How often do you text while you are buzzed/under the influence?</i>	<i>Mean Age</i>	<i>Frequency</i>	<i>Percent of Sample</i>
Never	39.1	78	47.3
Rarely	27.5	50	30.3
Often	23.1	30	18.2
Always	22.6	7	4.2

In an effort gain perspective about respondents' perceptions of other people's text-messaging patterns, participants were asked how frequently they believe people "cheat" (including intimate conversations) on significant others through text messaging. Over 77 percent of respondents believe people cheat "sometimes" or "often" through text-messaging. When asked how frequently they believe men text versus women, older respondents (mean age 45.5) were significantly more likely than younger respondents (mean age 31.1) to report perceptions of women texting more frequently than men ($p < .05$).

The next set of questions addressed the meaning that people attach to texting behavior, either theirs or someone else's. Respondents were asked how often they text with people who do not or will not text back. Only 20 percent of respondents report texting with people who sometimes, or often, will not text back. Participants were then asked how long they wait before responding to a received text message; 57 percent report that they try to reply to received messages "quickly" or "as soon as received." A one-way ANOVA analysis confirms that as age increases, the probability of responding quickly or as soon as received decreases ($p < .05$). When asked if respondents were bothered when people did not text back right away, over 62 percent reported rarely, if ever, being bothered by non-response or delayed responses. However, of the 38 percent who are "sometimes" or "often" bothered, younger respondents are significantly more likely to feel bothered by a delayed or no response than older respondents ($p < .05$).

Emoticons (smiley faces, sad faces, etc.) are often used to represent emotion in text-messages. Sixty percent of respondents report rarely, or never, using emoticons. Of the 40 percent who sometimes or frequently use emoticons, the most popular feelings to display are :) or ☺ (smiley/happy), :(or ☹ (sad/frowning), :-P (silly/sticking tongue out), and <3 (heart/love). Younger respondents are significantly more likely to use emoticons than older

respondents. The mean age for using emoticons “often” and “always” is 24.7; the mean age for “rarely” or “never” categories is 32.3. A one-way ANOVA confirms this finding ($p < .05$).

The next three questions were followed with requests for detailed explanations for answer choices. The qualitative responses are presented in the next section. Respondents were asked how often they say things through text-messaging that they would not say during a face-to-face conversation. They were also asked how often they say things through text that they wouldn't say over the phone. The responses to these two questions were nearly identical, with 63 percent of respondents reporting “rarely” or “never,” 22 percent indicating “sometimes,” and 15 percent reporting that they “often” or “always” say things over text that they would not say in person or over the phone. A one-way analysis of variance was used to examine the differences of mean age among response categories. The ANOVA confirmed that younger respondents (mean age 21.9) are significantly more likely than older respondents (mean age 32.5) to say things over text that they would not say in person or over the phone ($p < .05$). Finally, respondents were asked whether or not they feel a mutual ending must be established before ceasing a text-message exchange. Sixty-four percent of respondents do not feel a mutual ending needs to be established. The data suggest that as age increases, the probability of feeling a mutual ending must be established decreases. An independent samples t test confirms this difference in mean age between those who believe an ending must be established and those who do not ($p < .05$).

Qualitative Data

Five questions were presented in an open-ended format in order to elicit more detailed information about people's perceptions of text-messaging. The questions focused on 1) common reasons for text exchanges, 2) the benefits of text-messaging over voice conversations, 3) if text-messaging is used to *avoid* having voice conversations and, if so, why, 4) the drawbacks of text-

messaging compared to voice conversations, and 5) the etiquette of text: whether or not the respondent feels a mutual ending must be established. Responses varied from short answers to short paragraphs, and many respondents included multiple answers to each question. The data were compiled for content analyses.

Reasons for Using Text-Messaging.

Prior text-messaging research revealed that youth use text primarily for chatting with many acquaintances and general friendship maintenance (Grinter and Eldridge 2001). While adults do use text-messaging to maintain relationships, the primary use reported was event coordination. Adults use text-messaging for planning social activities with others including dinner outings, movies with friends, and impromptu frisbee golf games. Scheduling meetings, massage and hair appointments, and even confirming service appointments are also occasionally conducted via text-messaging.

A division of event coordination emerged primarily among female respondents: child-work. Women use text-messaging as a parenting tool. They report using text to “keep track of the kids” and “check [a] child’s location.” This convenient device allows parents to get quick messages to their children about schedule changes, remind them of doctor or dental appointments, or inform them of transportation arrangements. Text-messaging also allows parents to ‘check up’ on teens in a nearly covert manner. Parents can send a quick text to their teen to inquire whereabouts without the child being ‘embarrassed’ in front of their peers. One respondent reported that, due to their hectic schedules, she would have almost no contact with her teen daughter if not for text-messaging. It is important to note that of those respondents who report having children with whom they text, twice as many mothers report doing child-work than fathers. This finding supports the concept of a “second shift” for women in which the bulk of

unpaid household labor (i.e. cleaning and childcare) primarily among heterosexual couples is unequally divided (Hochschild 1989).

Adults, like youth and young adults, also use text-messaging as a tool for maintaining relationships. Respondents report using text-messaging as a device to stay in touch with out-of-state friends and family. They send quick notes to parents “just to say I love you” and inform concerned friends and siblings of their whereabouts. Using text-messaging to maintain romantic relationships was a common theme in this research. Adults flirt with significant others via text-messaging. One respondent even claimed to use text messaging to “schedule late night encounters.” Texting as a means for emotional support is also possible. Several female respondents use texting to send “inspirational messages” and “notes of encouragement” to friends and loved ones.

Many respondents report using text-messaging out of boredom; this was overwhelmingly reported by younger respondents. They claim texting gives them something to do and occupies idle time. One respondent compared texting while in class to “passing notes” to pass the time. Younger respondents frequently use text-messaging as means of entertainment. They use text to send and receive jokes, horoscopes, cartoons, and photos. Older respondents also report using texting for entertainment but more often in the form of informational services such as receiving news tidbits, sports scores, and weather updates.

Text-Messaging vs. Voice Conversations.

Participants were asked to respond to an open-ended question regarding the benefits of text-messaging over having a voice conversation. Brevity was an overwhelming response followed by privacy. Those who use texting enjoy the ability to send a quick piece of information without the formality of a phone call. They appreciate the ability to be concise and

to the point, especially when they are short on time. Many respondents report privacy as a major benefit over voice conversations. They value the ability to discreetly send a message without other people who might be near to hear their voice. In other words, text-messaging eliminates the possibility of eavesdropping. Those who text also value the privacy of text-messaging because it isn't audibly disruptive to others; it eliminates the discomfort of trying to whisper into a mobile phone while at the library or a physician's office.

The privacy of text-messaging is largely valued due to the ability to secretly communicate with others while at work or school. Several respondents report text as a benefit over voice conversations because they aren't allowed to talk on the phone while at work, but as long as they were secretive they could get away with texting while at work. College students also report the secretive nature of texting as a benefit. Many respondents wrote of the benefit of "not getting caught" while texting in class.

Convenience for ones' self and for others was reported as a benefit of text-messaging over voice conversations. Respondents enjoy the time that text-messaging allows them to have when planning a response and gives them the flexibility to respond when it is convenient for them. They also appreciate that texting allows them to be considerate of others. Many respondents reported that they can text someone when they are unsure of the person's schedule, without worrying about disrupting them during school or work. Texting ideally offers both the sender and recipient the benefit of reading and responding when convenient, although the tolerance of delayed responses as acceptable varies from person to person.

The ability to multi-task is also an additional benefit of text-messaging. Respondents enjoy the ability to carry on multiple conversations with people almost simultaneously, and texting allows them the ability to address many people with general information at one time,

such as sending out a “mass invite” to a party. In addition, text-messaging can be used while doing chores or homework, but it allows the ability to respond at the end of a task or thought rather than having to stop immediately to answer a phone call. Finally, text-messaging provides the ability to relay information or locate others while at a loud concert, party, or ballgame where voices could not be heard over a phone.

Avoiding Voice Conversations.

Another theme that emerged during this research was using text-messaging to limit or control interactions with others and to manage negative emotions associated with particular people or situations in their lives. The researcher asked respondents if they had ever used text-messaging to “avoid” having a phone conversation with someone. The majority of respondents reported that they had and gave a variety of reasons for doing so. Many reported the need for brevity or a desire to avoid long-winded talkers. Others claimed that voice conversations call for an immediate response—text-messaging allows them time to compose thoughts and formulate responses. They have the freedom to express emotion without being interrupted and losing their train of thought as well as finding it easier to describe, or mask, feelings “in writing” rather than in an unrehearsed voice conversation.

When analyzing open-ended responses to this question it became apparent that adults use text-messaging to facilitate emotion management. Emotion management refers to people’s efforts to change, suppress, or evince feelings or expressions in themselves or in others (Copp 1998). Respondents wrote of using text-messaging to avoid conversations with people who they were arguing with or angry with; in this sense, they are managing their own negative emotions toward that person by refusing to have more intimate contact with them over the phone or in person. Text-messaging gives them the ability to control or limit the interaction they have during

an emotionally sensitive time. Others report that they didn't want to have to hear someone yell at them or didn't want to have to hear someone cry. These are examples of using text to manage *others'* negative emotions by giving them time to "cool off" before addressing the issues in a voice conversation.

In addition to managing negative emotions associated with conflict, adults also used text-messaging to manage embarrassment. Many respondents claimed texting helps them avoid uncomfortable situations. They use text to avoid discussing uncomfortable topics, to avoid potentially awkward moments with people they don't know very well, or simply because they are shy. Several respondents wrote of texting because they were embarrassed to "let feelings show," because they "didn't want others to hear them cry," or didn't want others to hear their "tone of voice" or know their "state of mind." They claim that through voice conversations, other people can detect mood and emotion; text-messaging allows them to disguise their emotions and avoid potential embarrassment.

Adults report using text-messaging to distance themselves from others. Several respondents described situations in which they chose not to have closer (or more intimate) contact with someone such as an ex-spouse. Texting allows them to control the amount and frequency of communication and forces the communication to be on specific terms. One respondent wrote about an ex-partner "crossing the boundaries"; she claimed to control his actions, and thus their communication, by giving him the "silent treatment." In this way, she is teaching him the types of communication she will and will not tolerate. This method of controlling communication could potentially backfire through unwelcome face-to-face interaction, but texting rather than calling allows users to refrain from upholding turn-taking conventions in voice conversations (Holtgraves 2002).

The most prominent theme among respondents was the use of text-messaging to avoid voice conversations because the person was not feeling sociable. Respondents wrote of not “feeling” like talking, not being in the “mood” to talk, and avoiding being “pressured” into having a long conversation. Because mobile phones are nearly always turned on and usually in the owners’ possession, users are pressured into being continuously available. Texting is an easy way for them to control sociability and to avoid interacting when they are not “in the mood,” but gives the semblance of sociability by having contact, albeit limited, with the other person.

Drawbacks of Text-Messaging.

Survey respondents were asked to list some of the drawbacks of using text-messaging. The researcher believed this question might shed some light on the reasons for the slower adoption of text-messaging technology among adults compared with the rapid use among youth. Several mature adults reported that text-messaging is difficult to do because the keyboards are small and confusing. They also find that they are able to relay information more quickly with a phone call rather than type out messages one letter at a time. Respondents overwhelmingly reported the inability to detect emotion or expression as a major drawback of text-messaging. Many respondents stated that they disliked not being able to hear loved ones’ voices—to enjoy the tone or vocal inflection gained through voice communication; others replied that they disliked the inability to detect moods, including sarcasm or playfulness, through text-messaging. They also reported that text-messages are too brief, and too much detail is lost in short text conversations. The limited number of characters allowed per text causes some text users to incorporate abbreviations into their messages, which can cause messages to become cryptic and difficult to understand. Thus, the very features that make texting an attractive means of

communication for the sender—particularly emotion management, brevity and social distancing—can also be liabilities for the recipient.

Mutual Endings.

In the quantitative section, we learned that 64 percent of respondents believed that it is not necessary to establish a mutual ending before ceasing a text exchange. When asked for detailed explanations of their answer choice, only 46 percent of the 171 respondents selecting “no” provided a descriptive explanation. The most frequently cited reason was that “texting isn’t a real conversation.” Respondents also described texts as “blurbs,” as a “sequence of memos,” and as “informal” conversations. One respondent described his perception of texting as “an informal exchange, like yelling at someone out a car window.” In contrast, 88 percent of those choosing the “yes” category provided descriptive responses. The most frequent reasons were because “it’s polite/customary”; “it’s like saying goodbye on the phone”; “you wouldn’t just hang-up on someone”; and “it ensures all messages were received.” One woman gave a detailed explanation that reiterates some of the previous reasons: “if talking on the phone you don’t just hang up on someone in the middle—you have a closing. unless the text is explanatory, as in ‘ok see you at 7’ an ending should be included to keep others from ‘hanging.’”

CHAPTER 5

DISCUSSION

At first glance, text-messaging may seem more like a technological rather than a sociological phenomenon. Further investigation of this data reveals the sociological impact of text-messaging on survey respondents. Several areas of interest emerged during in-depth examination of the data including: the authenticity of text-messaging as communication, using texting to facilitate emotion management, controlling sociability, liabilities of convenience, and how age and gender affect texting norms.

Is Text-Messaging a “Real” Conversation?

As indicated in the previous chapters, texting as a technology both supports and frustrates “relating” to others. A factor that contributes to this tension is that participants in this study differ as to whether or not texting is a “real” conversation. Text exchanges can have the consequences of “real” voice conversations. Just as with voice conversations, texting allows us to display our cultural understanding of communication norms which help us sustain, modify, and sometimes damage our relationships with others (Cahill 2004). Text-messaging also both adheres to and breaks, or at least bends, the “rules” of traditional conversational structure. Yet, participants differed as to whether or not they perceived communication as having “layers” of formality (e.g. a letter is more formal than an email; email more formal than a text).

Many respondents report that text-messaging isn’t a “real” conversation or suggest that texting isn’t like conversing with “real” people—we will call these respondents the ‘informal texters.’ This perception of text-exchanges as inauthentic conversation may stem from the perception that texts are devoid of “personal” attention or “human” contact. To informal texters, texting is simply an exchange of information—traditional norms such as openings and closings

do not apply as they would with in-person or phone conversations. In this sense, informal texters uphold the idea that communication has layers of formality. When the words of a text exchange are disembodied through technology, people may feel the words lose intimacy, value, and meaning. To them, texting is more like a snapshot of a conversation rather than a full and complete method of communication. Informal texters compare a text-message to a voice conversation as the equivalent of a postcard to a detailed letter.

In contrast, other participants—the “formal texters”—view text-messaging as a fully developed method of communication. Formality exists regardless of communication method. Thoughts, ideas, and feelings are exchanged just as with any other form of communication. For the most part, they believe traditional communication norms including opening and closing civilities apply to text-messaging and they express concern with others’ feelings regarding their text communication and how recipients perceive them as communicators. They believe mutual endings must be established to avoid leaving others “hanging,” to give the other person the opportunity to say everything he or she intended, and to ensure that all messages were received and the information understood. No real pattern exists as to what type of respondent is a formal or informal texter; these behaviors appear to transcend age and gender. Although younger respondents (mean age 21.9) were more likely to report feeling a mutual ending must be established, this doesn’t necessarily suggest that younger respondents are more formal texters. When these results were combined with the other open-ended responses, a pattern emerged that suggested younger person’s desire for mutually-established endings has more to do with concern over social place and status in the eyes of their texting peers rather than a need to conform to traditional or formal communication norms. That concern over social place possibly offers a clue to what differentiates formal from informal texters.

Social psychologist Thomas Holtgraves (2002) asserts that conversational structure is governed by a necessity for “face management.” He emphasizes that maintaining communication structure is partially due to interpersonal reasons and is a reflection of the communicator’s effort to manage face, to negotiate power, and to establish or dismiss relationships. Holtgraves also asserts that removing face threats, such as potential embarrassment, from conversations would increase directness and would eliminate the need for ritualistic opening and closing civilities. Consequently, a possible reason for the split between formal and informal texters may revolve around how they handle face threats in a variety of situations. Informal texters may exhibit strong self-confidence, such that they worry less about potential embarrassment or loss of face in texting. For the formal texters, though, the consequences of communicating with others who choose not to use formalities could include hurt feelings and frequent miscommunications and misinterpretations and thus greater chances for embarrassment.

Informal texters view texting as inauthentic compared with other forms of communication, although inauthenticity is actually present in most types of communication. We behave inauthentically when we hug someone whom we are not comfortable hugging; when, during a face-to-face conversation, someone smiles and asks us how we are and we reciprocate with a smile and “great, thank you,” even though we may not be “great” at the moment; and when we participate in ritualistic civilities over the telephone when replying, “oh how nice” or “I’m so happy for you” when in fact we may not be particularly happy at all. Given these examples, dismissing texting as fundamentally inauthentic compared with other forms of communication may be a premature assumption.

Liabilities of Convenience

Respondents report some of the benefits of text-messaging as brevity, the lack of expense, its vast availability, and situational convenience. Other respondents find texting to be impersonal, informal, cryptic, and inadequate for meaningful conversations and complicated messages. The advantage of texting to communicate the essentials thus has a drawback of preventing nuanced interaction.

Although the majority of respondents do not frequently use abbreviations and often use punctuation, cryptic text-messages were reported as a major drawback. These obscure messages, which demand deciphering, combined with a lack of emotion and expression can cause serious misunderstandings between communicators. In addition, respondents reported that people lose a feeling of emotional connectedness without voice conversation, and that vocal inflection/tone of voice is used to “prove emotion in words” (Respondent 28). This loss of emotion and increase in misunderstandings through text-messaging could potentially disrupt relationships, although the extent of disruption depends on the type of relationship one has with the person she or he is texting. Family, close friends, and significant others—people with whom we have frequent contact and more intimate relationships—may know us well enough to be able to properly interpret cryptic information. Those who are in early stages of friendship/dating/new acquaintances are more likely to misinterpret or misunderstand short text communications and may be less likely to feel comfortable enough with the sender to ask for clarification.

Controlling Sociability. In some ways, owning a cellular phone creates an understanding that we are always available for social interaction. The cell-phone is usually either on the person or within close proximity. Because we are so frequently “on,” text-messaging can be used as a device to control sociability. Nearly 70 percent of respondents report using texting as a means to

avoid phone conversations. The most popular reason cited was, “I wasn’t in the mood to talk.” Other explanations included: “didn’t want to get into a long conversation”; “easier to end a text conversation”; “didn’t want to be pressured into talking”; and “because I was tired or annoyed.” These examples suggest that, even though respondents own mobile phones, they do not always *want* to be available for social interaction.

It is important to note that this behavior may be culture-specific. Americans use several physical gestures to convey a desire to avoid being social: not answering the phone or a text; looking away from another person’s gaze; casting our eyes downward; not holding elevators for others; and even being quiet or slow to respond during phone or face-to-face conversations. These behaviors suggest to others that we are not in the mood to be “social.” In contrast, Americans frequently use gestures such as waving or smiling at others—even those we do not know personally—to give the impression of our desire to be social. These behaviors send the signal that we are “open,” friendly, and “approachable,” which could be interpreted as being available for sociability. Texting permits respondents to engage in both social and nonsocial behaviors. They can send a quick note, or respond to a received message, without having to be fully engaged in a “social” experience. It allows them to give the *semblance* of being social without having long or detailed social interaction.

Text-messaging offers another way to control sociability because the recipient of a text message holds power in a texting transaction. Respondents report *waiting* for the recipient to respond to a sent message as another drawback of texting. The technology doesn’t provide a transmission report, and, although the illusion of text-messaging is that of a nearly instant reply, it isn’t always the case. Respondents report often not knowing whether a text was received. This creates confusion for the sender who is awaiting a response. If the sender is expecting a timely

response and does not receive one, the sender may question the importance of the relationship to the recipient. An extremely delayed response or no response can signify that the sender isn't highly valued by the recipient.

Two separate studies have found evidence of social exclusion via text-messaging to have negative emotional consequences. Taylor and Harper (2003) found that individuals feel left out or dejected when text-messages are not reciprocated. This exclusion represents a breach of reciprocity with the social network. Smith and Williams (2004) conducted a text-messaging experiment focusing on social exclusion. In their experiment, some social actors were intentionally ostracized; they found that individuals who felt ostracized through text-messaging had lower self-esteem and reduced levels of a sense of belonging.

This self-realized value, rank, or “social place,” as Candace Clark (1990) calls it, functions as a marker that helps us to realize where we stand relative to others at any given moment. In this sense, and particularly in romantic relationships or hierarchal relationships such as communicating with a boss, the initiator of a text transaction is in a precarious position. The timing of a response can lead to enforcement of a position of value or status or can reinforce an underlying feeling of unimportance or inadequacy.

Texting to Facilitate Emotion Management

Responses to several of the open-ended questions suggest that, in addition to controlling sociability, respondents also use texting to manage emotions—either someone else's or their own. When respondents were asked to elaborate on why they text to avoid voice conversations, responses included: to avoid confrontation; because I was embarrassed; I was shy; so I wouldn't have to hear them cry; because I was angry; because they were angry; hurt feelings; avoidance; because I didn't know them well; and I didn't know what to say. Respondents also reported

using text-messaging to avoid the following: letting feelings show; so others wouldn't detect their mood; and to talk about uncomfortable topics. Texting allows them time to "formulate thoughts" and to "think before responding." Participants also report using text-messaging to buy them time to "express emotion without being interrupted" and because "it's easier to write what I am trying to say—I don't have to express myself on the spot." These responses indicate that text-messaging allows respondents to avoid potentially embarrassing situations and to "save face" (Goffman 1967). In using text-messaging to disguise emotions and avoid embarrassment, texting is also helping adults manage their "presentation of self" (Goffman 1959). As such, texting both facilitates and complicates self-presentation.

Gender and Age in Text-Messaging

Several differences regarding age were identified in this study, although some of the findings were different from those initially expected. Age is not a factor in determining whether a text user upholds formal or informal communication norms. The working hypothesis that older respondents would be more likely to use full words rather than abbreviations and to use proper punctuation—behaviors that would likely support a 'formal' view of texting—were not supported. Younger respondents were found to use proper punctuation slightly more often than older respondents. Because younger respondents send and receive more text-messages, perhaps they are more comfortable with the technology than older respondents and find it easier to compose messages with full words and punctuation. The availability of full-letter QWERTY keyboards, rather than numeric keyboards, may also affect the use of abbreviations versus spelling full words. These findings support Thurlow and McKay's (2003) and Crystal's (2008) assertions that texting, specifically by younger individuals, is not destroying or corrupting the English language.

Younger respondents are more likely to text while driving and while intoxicated. This could be due to youth and younger adults more frequently engaging in risk-taking behavior (Williams 2003). Although not supported in this study, older respondents' perceptions of women texting more frequently than men could indicate that some older persons still hold the popular cultural assumption that women are more frequent or better communicators than men.

Because younger people indicate a higher probability of being "bothered" by not receiving immediate responses to their sent messages, being more likely to express emotion in the form of emoticons in their messages, and reporting a higher probability of saying things over text that they wouldn't say in person or over the phone, we can conclude that younger respondents are more likely than older respondents to react emotionally to text-messaging. Several younger respondents reported that the pressure to "perform" during face-to-face interaction is sometimes daunting. In contrast, texting allows them time to formulate a clever or thoughtful response without immediate pressure. In this sense, texting is a less inhibiting form of communication than phone or face-to-face conversations.

Older respondents are less likely to be bothered by other people's texting behavior. Younger respondents use text-messaging with more frequency, use it as a means of entertainment, and use it for socializing. Older respondents are less likely to text frequently, but when they do it is often with a specific purpose in mind rather than out of boredom, as younger respondents reported. This, combined with the quantitative and qualitative data regarding reasons for using text-messaging, allows us to conclude that older adults' text-messaging is more "task-oriented" than that of younger respondents and suggests the possibility that texting is less central to adults' sense of who they are. Because young adults text more, and presumably with same-age peers more than others, texting may play a central role in their social life and in their

development of self. This might explain the greater degree of emotionality they bring to text-messaging compared to older respondents.

A survey conducted for Cingular Wireless reported that nearly half of all parents who text-message were taught to text by their child(ren) (TEXT2CONNECT 2006). This study found the percentage to be nearly half that number: less than 25 percent of respondents who have children who text report having learned to text from their child. Perhaps in this case the trickle-up or reverse socialization theory isn't fully applicable. Because information is traditionally passed from adults to children, one must wonder if some adults are resistant, or at least defensive, about learning technology from their children.

The only notable gender difference in texting between women and men is that mothers are more likely than fathers to text with their children. Women use text to schedule events, appointments, and coordinate schedules with children. As mentioned earlier, this supports Hochschild's view of a second shift for women but not for men. Men benefit from this unequal division of labor with more time for paid work and increased leisure opportunities, while women are more likely to contend with role conflict and overload, have fewer leisure opportunities, and are disadvantaged in the workplace as a result of their many responsibilities at home (Bittman and Wajcman 2000).

Although the data from this study are based on a convenience or snowball sample, no gender pattern in frequency of texting, use of texting as avoidance, or other texting behavior emerged. Common cultural assumptions (that lack empirical support) lead us to believe that women communicate more than men and that men express little emotion, whereas women are perceived as overly emotional. Previous studies of face-to-face communication between women and men have revealed that men actually talk more than women, that men try to control the

direction of the conversation, and that men interrupt more than women (Coates 2004; Thorne 1975). Because texting is more of an asynchronous conversation, devoid of the physical person, it may function as a status leveler between genders during communication. In this sense, we can suggest that texting may have a gender neutral place in women's and men's social lives. The findings in this study suggest that it is just as important to investigate similarities among women and men, as it is to research potential gender differences.

Study Limitations

Several limitations of this study warrant consideration. The Johnson City area has a small ethnic minority population that may not be adequately represented due to the voluntary aspect of the data collection methodology. The present study was restricted to gathering participants through the University Sona system and through word of mouth. Class bias or under-representation of all social class categories is another potential limitation due to small sample sizes and the voluntary nature of the research methods. A more diverse population could have been achieved through other research methods such as mail or telephone surveys.

When developing the survey, the researcher did not anticipate having respondents from outside of the Johnson City area and failed to ask for county, state, or region or residence. It was later discovered that a few respondents were recruited by word of mouth residing in New England and in Ireland. Given the methods of recruitment, little generalizability of this research is possible, and findings are limited to the study population. Because the majority of respondents in this study were women, the claims regarding texting differences between fathers and mothers with their children are limited to this study. If replicated with a more equal percentage of women and men, this study may produce different results.

Suggestions for Future Research

As suggested in this research, text-messaging by mature adults is more task-oriented than that of young adults. Content analysis of actual text-exchanges could confirm this assertion. Texting patterns between parents and children could be promising to research, especially given the difference in texting patterns in this research between fathers and their children and mothers and their children.

Most gender communication patterns are so entrenched and taken-for-granted in everyday life that participants rarely notice them. Relying on self-reports of behavior may not be the best approach for exploring possible differences in women's and men's texting behaviors. Designing a study with slightly different methodology in which the content of women's and men's actual text exchanges could be analyzed might produce different results with regard to gender differences in text communication.

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APPENDICES

APPENDIX A

Informed Consent

This research project is being conducted to better understand the use of text-messaging technology by adults in our society. This online survey is brief and should take no more than 20 minutes of your time. We would greatly appreciate you filling out the entire survey, but please feel free to skip any item(s) that you wish. You may withdraw from the survey at any time prior to hitting the submit button. This survey is anonymous and we ask that you make no entry that might identify you in any way (please do not put your name, address, etc., anywhere on the survey). You must be at least 18 years of age to participate.

If you are a parent of a college student at ETSU who is participating so that your son/daughter will get modest course credit for your participation, please make sure that you have his/her Sona ID Tracking Number before starting, as failure to put this number into the survey when prompted will make it impossible to award him/her any extra credit for your participation.

If you have any questions, comments or concerns about the research project at any time, please feel free to contact the Principle Investigator, Angela Barlow, at angelambarlow@gmail.com. The only benefits expected for this research are that you may potentially feel good about contributing to the knowledge base of sociological research on the use of text-messaging technology. There are no known risks for your participation in this project. By continuing forward with the survey from this point, you are implying that you have read and agree to the above conditions. Thank you very much for your time.

APPENDIX B

Statement of Confidentiality

Please remember this survey is anonymous and the information is confidential. Please do not put your name anywhere on the survey. **NOTE: IF YOU ARE AN ETSU STUDENT OR PARENT OR FRIEND OF A STUDENT RECEIVING RESEARCH CREDIT AT ETSU, YOU MUST ENTER THE SONA ID NUMBER FOR THAT STUDENT AT THE END OF THE SURVEY BEFORE SUBMITTING IT, OR THE STUDENT WILL NOT GET CREDIT FOR PARTICIPATION!!!!!!** The SONA ID code is located at the bottom of the study sign-on page on SONA (only ETSU students have access to this), or can be found under "My Profile."

APPENDIX C

Barlow Text-Messaging Questionnaire

1. Age (write in # years old):
2. Gender:
3. Do you have a cell phone?
4. How often do you use someone else's cell phone?
5. If you use someone else's cell phone, whose do you use?
6. Do you have children/step-children/foster children who use text messaging?

Yes No

6ai. If you have children who text message, what is the age of Child 1? _____
If you do NOT have children who text message skip to item #13

6aii. If you have children who text message, what is the gender of Child 1?
If you do NOT have children who text message skip to item #13

Female Male

6bi. If you have children who text message, what is the age of Child 2? _____
If you do NOT have children who text message skip to item #13

6bii. If you have children who text message, what is the gender of Child 2?
If you do NOT have children who text message skip to item #13

Female Male

6ci. If you have children who text message, what is the age of Child 3? _____
If you do NOT have children who text message skip to item #13

6cii. If you have children who text message, what is the gender of Child 3?
If you do NOT have children who text message skip to item #13

Female Male

7. Have YOU ever used text messaging?

___No ___Yes

8. Who taught you to text-message?

Please check all that apply.

Self-taught

Friend

Mother/Step-Mother

Father/Step-Father

Child(ren)

Sibling

Other Family Member

Girlfriend/Boyfriend/Spouse

Teammate

Coworker

9. Who are the people you most often text message?

Please check all that apply.

Friend

Mother/Step-Mother

Father/Step-Father

Child(ren)

Sibling

Other Family Member

Girlfriend/Boyfriend/Spouse

Teammate

Coworker

10. Who is the ONE person you text message most often?

Friend

Mother/Step-Mother

Father/Step-Father

Child(ren)
Sibling
Other Family Member
Girlfriend/Boyfriend/Spouse
Teammate
Coworker
Other: _____

11. On average, do you SEND more texts than you receive, or do you RECEIVE more texts than you send?

- I send more texts than I receive
- I receive more texts than I send
- I send and receive texts equally

12. Approximately how many text-messages do you send or receive per hour, on average?

- One or less
- 2-4
- 5-10
- 10-15
- more than 15

13. Approximately how often do you send and receive texts (combined) per DAY, on average?

14. Approximately how often do you send and receive texts (combined) per MONTH, on average?

15. If you have a text-messaging plan, how many texts are included in your monthly billing cycle?

- Less than 100
- 101 – 250
- 251 – 500
- 501 – 1000
- 1001 – 3000
- Unlimited

16. What are the most common reasons for your text exchanges? (A couple of examples: Scheduling events (if so with whom), or Planning social activities)

17. What are the benefits of text-messaging over having a voice conversation?

18. What are the drawbacks of text-messaging over having a voice conversation?

19. When texting, do you feel a mutual 'ending' needs to be established before ending a text conversation?

No Yes

20. Why do you or why do you NOT feel a mutual 'ending' needs to be established before ending a text conversation?

21. Have you ever used texting to "avoid" having to talk to someone? No Yes

22. If you have ever used texted to "avoid" having to talk to someone, what are some of the reasons you texted instead of talked to someone?

23. How many of your friends use text messaging?

None Very few Some Many Most All

24. How often do you text for work purposes?

Never Rarely Sometimes Often Always

25. Do you HAVE to look at the phone keypad in order to text? In other words, how well do you have the keypad memorized?

Always HAVE to look at the keys as I type

Often HAVE to look at the keys as I type

Sometimes HAVE to look at the keys as I type

Rarely HAVE to look at the keys as I type

Never HAVE to look at the keys as I type

26. How often do you think people "cheat" on significant others through text messaging? This would mean having intimate conversations with someone besides a significant other.

Never Rarely Sometimes Often Always

27. How much do you think males text?

Never Rarely Sometimes Often Always

28. How much do you think females text?

Never Rarely Sometimes Often Always

29. How often do you receive crude humor or dirty pictures through text messaging?

Never Rarely Sometimes Often Always

30. How often do you say things through text messaging that you wouldn't say face-to-face in person?

Never Rarely Sometimes Often Always

31. How often do you say things through text messaging that you wouldn't say over the phone?

Never Rarely Sometimes Often Always

32. How often do you wait before replying to a text message?

Don't reply
 Sometimes don't reply
 Reply when I feel like it
 Try to reply quickly
 Reply as soon as received

33. How often do you text when you are at church?

Never Rarely Sometimes Often Always

34. How often do you text when you are having a meal with other people?

Never Rarely Sometimes Often Always

35. How often do you text other people when you are also having face to face conversations?

Never Rarely Sometimes Often Always

36. How often do you text while you are working?

Never Rarely Sometimes Often Always

37. Do you usually text using full words or abbreviations?

- Almost all full words
- Mostly full words
- Some full words, some abbreviations
- Mostly abbreviations
- Almost all abbreviations

38. How often do you use correct punctuation (like commas, apostrophes, semi-colons) when it is usually called for?

- Never
- Rarely
- Sometimes
- Often
- Always

39. How often do you text while driving?

- Never
- Rarely
- Sometimes
- Often
- Always

40. Have you heard of any negative stigma against adults over 40 using text-messaging? If so, please describe.

41. How often do you text people who don't/won't text back?

- Never
- Rarely
- Sometimes
- Often
- Always

42. How often do you feel bothered when people don't text you back right away?

- Never
- Rarely
- Sometimes
- Often
- Always

43. How often do you use emoticons in your text messages (symbols that show how you are feeling)?

- Never
- Rarely
- Sometimes
- Often
- Always

44. If you ever use emoticons in your text messages (symbols that show how you are feeling), what kind of emotions do you usually show?

45. How often do you text when you are buzzed or under the influence?

- Never
- Rarely
- Sometimes
- Often
- Always

46. Do you text MORE when you are under the influence than when sober? Yes No

47. Racial/Ethnic/Cultural Identity:

- African American/Black
- White/European American
- Asian American
- American Indian

- Hispanic American
- Bi-racial/Multi-racial American
- Citizen of a Foreign Country
- Other (please type in):

48. Marital Status:

- Married
- Single
- Divorced
- Separated
- Co-habiting/living together
- Widowed

49. What is the highest educational level you have completed?

- less than 8th grade
- some high school
- high school graduate or GED
- some college
- college graduate

50. What is your best estimate of your family's total combined income for the year 2007?

- \$0 to \$14,999
- \$15,000 to \$24,999
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,000
- \$150,000 to \$200,000
- Above \$200,000

51. Current Employment Status:

- Not working outside the home currently
- Do only volunteer work outside the home
- Working part-time (less than 20 hrs/wk)
- Working part-time (between 21 and 39 hrs/wk)
- Working full-time (40 or more hrs/wk)
- I work as a stay at home Mom
- I work as a stay at home Dad

52. If working outside the home currently, what is your job/occupation?

VITA

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