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“To Text or Not to Text”:

Reticence and the Utilization of Short Message Services

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Abstract

The purpose of this study was to examine if and how reticent individuals utilize short message services or texting as a medium of communication. Specifically, this study sought to examine whether reticent individuals exhibit positive affect towards texting and to investigate the differences between high and low reticent individuals and the frequency of texting partners, the content of messages sent and preference for texting versus face-to-face communication. Participants ($N=245$) completed a four-part questionnaire consisting of general questions on texting usage, the RS-12, a shortened version of the Reticence Scale (Keaten, Kelly, 2000); the Content Frequency Scale and The Content Preference Scale, for texting and face-to-face communication; and Affect for Communication Channel Scale (ACCS; Kelly & Keaten, 2007) to measure affect for texting within the three dimensions.

Results show that reticent individuals have positive affect for texting and do not text any less than non-reticent individuals to friends, family and casual acquaintances. These groups do differ on frequency of messages sent to romantic partners with high reticent participants sending fewer text messages. High and low reticent individuals do not differ in the frequency or preference for texting across the content dimensions. The results of this study also suggest the types of messages participants sent.

Reticent individuals (Keaten & Kelly, 2000; Phillips, 1968, 1984, 1997) have fears of face-to-face communication, but new technologies are providing alternative channels of communication. Reticent individuals may prefer to use mediated channels such as e-mail, chat, instant messaging, and perhaps even short message services (SMS) or texting, a feature now offered by most mobile phones. The use of mobile phones today is so widespread that the majority of Americans own one and utilize it to maintain relationships. As of September 2006, there were “219.4 million cell phone subscribers or 72% of the population in the United States” (Wirefly Corporation, 2007). The mobile phone’s text messaging feature may have similar appeal to those individuals who fear face-to-face communication. Although users may be more likely to text someone they know; friends, family, and romantic partners, there is still a potential for some relationships to generate a degree of fear or anxiety about communicating.

As new mobile phone technology is continuously emerging, it is imperative to understand the impact this evolving technology has on those with communication anxiety problems. Research has not addressed the utilization of text messages by reticent individuals. Because text messages are similar in some respects to other forms of computer-mediated communication in that both are text-based, reticent individuals may prefer them to the voice calling feature. This study was designed to begin to address this issue.

Review of Relevant Literature

There are people who are apprehensive about communication. Keaten and Kelly (2000) defined reticence as occurring “when people avoid communication because they believe it is better to remain silent than to risk appearing foolish” (p. 168). Reticent individuals tend to withdraw from social experiences and interactions because they prefer to remain silent (Keaten & Kelly, 2000). These individuals truly believe that they are unable to succeed at communication because they have a fear of negative evaluation and thus they avoid or feel anxious in many social situations (Keaten & Kelly, 2000). By avoiding communication, reticent individuals often have fewer opportunities to practice and develop their skills (Keaten & Kelly, 2000). “Where reticent individuals differ most meaningfully from others is in their excessive worry about the potential for negative outcomes when communicating, especially the possibility of appearing foolish” (Keaten, Kelly, & Finch, 2000, p. 144). The reticence construct was deemed most appropriate for the present study because much of the research focusing on communication anxiety and computer-mediated communication was conducted with reticence as the focal construct. Kelly, Keaten and colleagues have an established line of research on reticence and computer-mediated communication (CMC), which is the foundation for this research project.

Previous research has suggested that individuals who experience communication anxiety problems exhibit a preference for mediated channels of communication. A number of studies have examined reticence, and the usage of CMC. Individuals who tended to exhibit positive affect towards mediated communication were more likely to use it as a way of communicating (Kelly & Keaten, 2007). Overall, studies have suggested that a mediated channel is preferred because of the ability to edit messages and control the flow of the interactions which reduces the anxiety felt by these individuals.

One line of research has suggested that the use of computer-mediated communication by communicatively anxious individuals provided a more comfortable environment. This comfort results in a positive impact on their communication skills. One study, by Kelly, Duran, and Zolten (2001) looked at the use of e-mail by reticent students to communicate with their professors, and suggested a preference for the use of email to communicate with their professors because they perceived it to be more comfortable than face-to-face interactions with them.

Several researchers have also examined mediated channels and their impact on fear of negative evaluation. One study conducted by Keaten and Kelly (in press) suggested that fear of negative evaluation by communicatively anxious individuals was related to a more positive affect for mediated channels.

Several studies have also examined a preference for mediated channels by individuals with communication anxiety because of the ability to carefully construct and edit the message which reduces feelings of anxiety. A Kelly and Keaten (2007) study examined Affect for Communication Channels (ACCS) through three dimensions; Increased Preparation and Control, (IPC) (with e-mail), Enhanced Meaning and Emotion (EME) (with face-to-face), and Reduced Anxiety and Inhibition (RAI) (with e-mail). "The IPC dimension is composed of items that indicated positive affect for e-mail because it provides greater time to think and prepare" (Kelly & Keaten, 2007, p. 357). The EME dimension "reflects positive affect for face-to-face communication because it is perceived as fostering a more meaningful connection between people" (Kelly & Keaten, 2007, p. 357). The RAI dimension "taps into positive affect for e-mail because it makes the communicator feel less nervous and inhibited" (Kelly & Keaten, 2007, p. 357). Another study by Kelly, Keaten, Hazel, and Williams (2007) looked at reticence and the mediated channel of instant messaging, and suggested that reticent individuals perceived instant messaging as reducing anxiety because it provided opportunities to prepare and control communication and not respond immediately. A final study conducted by Kelly, Keaten, and Finch (2004) examined reticent students' preferred channels of communication for interaction with faculty, and suggested that reticent students preferred e-mail over face-to-face interactions with a professor.

Another channel of communication that provides an alternative for reticent individuals is the mobile phone. "About 51% of American adults, or 143 million people, have cell phones, compared with 20% in 1997" (Jackson, 2005, p. 141). The mobile phone allows adolescents to organize their social life and activities which enriches their social experience (Ling, 2005). The majority of children who own a mobile phone are around the age of twelve (Mandell & Muncer, 2004). Doubling since 1999, nearly 40% of children ages 12 to 19 have cell phones (Jackson, 2005). According to Ling (2004) "the mobile phone shows that they are accessible and in demand..." (p. 103). Adolescents interact with other friends at a convenient time (Ling, 2005). A 2006 study by a research firm suggested that "if trends continue, more than 50 percent of the 'tween' population (8 to 12-year-olds) will be using a cell phone by 2010" (Hunter, 2007, p. 1). Because of the extensive use of the mobile phone, reticent individuals may be just as likely as non-reticent individuals to own one and perhaps utilize the texting feature also.

Text messages, a feature offered on most mobile phones, have become extremely popular, with the first message sent in 1993 (Goggin, 2006). The average number of text messages sent on a daily basis doubled between 1998 and 2003 (Ling, 2004). On average across the world, there are more than 335,000 messages sent every hour (Ling, 2004). A text message may be sent to coordinate activities, send a simple greeting, ask questions, etc. (Ling, Julsrud, & Yttri, 2005). A text message is a way to exchange information and to strengthen the social bonds between parties (Johnsen, 2003). A text message may be up to 160 characters in length and may contain abbreviations of common words and emoticons or smiles that may imitate facial expressions. "Due to the relatively limited form of the text message, it is possible to keep up the contact without 'investing' too much time and effort" (Johnsen, 2003, p. 165).

Mandell and Muncer (2005) indicate that texting may be a popular mediated channel of communication for adolescents because it reduces the social risks. According to Ling (2004) the

teen can carefully edit the message before sending it rather than fluster through an awkward telephone call. Since it is a mediated channel of communication, it often allows users to express themselves in a variety of ways without the fear or threat of negative evaluations from others. "Incompetent speakers may have trouble managing their own personal relationships. We establish and maintain relationships with others primarily through speech" (Kelly et al., 1995, p. 4). Texting may change this because it may allow users to establish and maintain relationships without speech. "For a significant number of users, sending a text message may be more important for building and maintaining social relationships than for coordinating practical arrangements" (Reid & Reid, 2004, p. 2). Also according to Reid and Reid (2004), "text messaging therefore seems to provide an opportunity for intimate personal contact whilst at the same time offering the detachment necessary to manage self presentation and involvement" (p. 3).

Because of this, texters commit more time and effort to the process of message composition and express things in the messages that they may not feel comfortable saying face-to-face (Reid & Reid, 2004). "Texters may feel at greater ease being their real self through a text message reducing the potential repercussions that may otherwise take place in a traditional face-to-face or telephone encounter" (Reid & Reid, 2004, p. 8). The SMS self and the real self sometimes do not meet and individuals are able to do things though texting that they fear in the real world (Kasesniemi & Rautianen, 2002). The indirect nature of text messages offers the reticent individual an opportunity to be confident because the threat of immediate or any negative evaluation is removed.

The channel of text messaging is considered asynchronous in that communication occurs at different time intervals since both communicators need not be available simultaneously. With texting, the sender posts a text message and the receiver decides when they will respond to that post. It is not always immediate. The asynchronous/synchronous feature of a channel is important because it affects the user's perceived control and ability to edit messages. In asynchronous forms of CMC, such as text messaging, the message can be carefully constructed and edited before it is sent. Synchronous communication channels necessitate that both communicators be on-line simultaneously, and have more resemblance to face-to-face interactions, at least in terms of the immediacy of responses.

The distinction between synchronous and asynchronous communication channels is becoming blurred (Kelly et al., 2007). As Baron (2005) reported, "users control whether to make a particular conversation active (i.e., synchronous) or to let it lie dormant (i.e., asynchronous)" (p.13). It actually could be argued that asynchronous text messages are considered synchronous because users are able to reply immediately if they choose to, making it closely related to instant messaging. However, synchronous instant messaging is often used asynchronously because many times a user may be multitasking (Kelly et al., 2007).

The synchronous to asynchronous dichotomy or continuum is one factor that influences individual choice of communication channel. O'Sullivan (2000) indicates, "People can use communication technologies to regulate self-relevant information in ways that minimize costs and maximize rewards to preferred impressions" (p.422). It is because of this minimizing the cost to the self that reticent individuals develop a high preference for the mediated channels of communication. Even in already established relationships; there may remain a degree of discomfort between individuals. Since a mediated channel allows one to hide information about the self, a reduction is seen in the amount of face threat and feelings of anxiety (Kelly et al., 2004).

To date, limited research has been conducted with regards to reticent individuals and the use of text messages. However, one study did examine text messages and low social skills. Hashimoto (2002) suggested that anxiety regarding direct communication led to a preference for text-messaging (Ishii, 2006). A “lack of social skills further leads to undesirable responses from others, which in turn makes the life of the socially inept more unpleasant” (Ishii, 2006, p. 350). The results of this study suggested that less socially skilled individuals prefer text messages because they help them overcome their shyness in interactions (Ishii, 2006). Because of the work of Kelly and Keaten, which suggests that reticence may be related to text message use, this study was designed to begin to address this issue.

Based on O’Sullivan’s theory of channel selection and the asynchronous nature of text messages, individuals with communication anxiety problems such as reticence may be more inclined to utilize the texting feature as opposed to the voice call feature on their mobile phone because individuals choose a particular channel in order to “minimize costs and maximize rewards” (O’Sullivan, 2000, p. 422). Thus, the choice to use texting likely enables reticent individuals to minimize costs since they are able to edit the message and to maximize rewards since the individual may feel less anxious, thus allowing for a smooth interaction.

Rationale, Hypotheses, and Research Questions

A large number of individuals experience anxiety about face-to-face interactions (Kelly & Keaten, 2007). Through their experiences with and perceptions of various channels reticent individuals develop positive or negative affect toward modes of communication based on perceived benefits of the medium in reducing face threats and enhancing self-perceived competence (Kelly & Keaten, 2007). Asynchronous channels such as e-mail and perhaps text messages may reduce anxiety, face threats and increase self-perceived competence, which may produce positive affect for that channel (Kelly & Keaten, 2007).

According to various studies, scholars in the field have suggested that reticent individuals “gravitate toward the use of on-line communication in their personal relationships” (Keaten et al., in press, pp. 3-4). Kelly et al. (2007) found that reticent individuals had positive affect for instant messaging because of reduced anxiety and the ability to control the interaction. Similarly, Keaten and Kelly (in press) found that reticence was positively related to the Reduced Anxiety and Inhibition and Increased Preparation and Control dimensions of the Affect for Communication Channels Scale for the channel of e-mail. According to Keaten and Kelly (in press) “e-mail helps reduce anxiety and inhibition while at the same time providing increased preparation and control, both of which appeal to the reticent person, who experiences anxiety about communication and fear of negative evaluation” (p. 8). Since texting is a mediated channel of communication, perhaps reticent individuals have an affinity for it as well; therefore the following hypothesis was posited:

H1: Reticence is positively related to the ACCS dimensions of Reduced Anxiety and Inhibition and Increased Preparation and Control and negatively related to the ACCS dimension of Enhanced Meaning and Emotion for the communication channel of text messages.

Reticent individuals prefer mediated channels for handling interpersonal interactions because it reduces feelings of anxiety and increases their self-perceived competence (Kelly et al., 2007). They have the ability to control the timing of the interactions and are able to edit and compose what they want to say before sending the message (Kelly et al., 2007). Because they often avoid communication, they are not able to practice and refine their skills and thus view themselves as incompetent communicators (Keaten & Kelly, 2000). Previous research has examined the relationships between the asynchronous channels of communication of instant

messaging and e-mail and suggested that reticent individuals have a preference for those channels. "The asynchronous nature of e-mail is presumed to produce a sense of control that may lead to increased self-perceived competence and decreased anxiety" (Kelly et al., 2007, p. 4).

Mandell and Muncer (2004) suggested that the average number of text messages sent on a daily basis was 2-5. According to a Mandell and Muncer study, 96% of children in the study communicated via text messages (2004). In regards to gender in the study, males sent an average of 89.8 messages and the females sent an average of 93.8 messages (Mandell & Muncer, 2004). While only 7.9% of the participants sent more than 16 text messages on a daily basis, 68.3% sent at least one message on a daily basis (Mandell & Muncer, 2004). The prevalence of texting among youth and the preference of reticent individuals for mediated channels, led to the following hypothesis:

H2: There is a positive relationship between reticence and frequency of text messages as a medium of communication within the social network.

According to Bryant, Sanders- Jackson, and Smallwood (2006) mediated channels such as e-mail and text messages allow "for rapid asynchronous communication within one's peer network" (p.579). Participants in their study spent an average of 2.82 hours per week texting and 2.2 hours a day on instant messaging (Bryant et al., 2006). The content of the instant messages included keeping in touch with friends or making plans with them (Bryant et al. 2006).

According to Ling (2005) teens are almost constantly sending and receiving messages, from in class to throughout the night. "Around 20% of teens say that they send and receive SMS messages after midnight on a weekly basis" (Ling, 2005, p.1). "The need to coordinate activities is a basic social function" (Ling & Yttri, 2002, p. 142). "Through SMS, teens hate, love, gossip, mediate, and express longing, even when the writer lacks the courage to call or in situations where other communication channels are inappropriate" (Kasesniemi & Rautiainen, 2002, p. 170). The content of the messages sent by teens can range from asking homework questions to locating people on a Friday night (Kasesniemi & Rautiainen, 2002). Several themes emerge when discussing the mobile phone, which include "security, coordination and accessibility" (Ling & Yttri, 2002, p. 140). Ling (2004) asserts that the content of most text messages is everyday tasks. Ling (2004) also identified the types of messages most often sent: "33% coordination messages, 14% answers, 6% information messages, 5% requests or commands, and 5% personal news" (p.156). These broad categories do not provide enough detail about the content of text messages; therefore the following research question was posited:

RQ1: Do reticent and non-reticent individuals differ in the content of text messages sent within the social network?

Research has suggested that reticent individuals prefer a mediated channel of communication over face-to-face communication. Texting is a mediated, asynchronous channel which allows users time to edit and compose a message prior to sending it, and thus high reticent individuals should prefer texting to face-to-face communication regardless of content. On the other hand, one assumes that text messages are sent to individuals one already knows because texting requires knowledge of one another's mobile phone numbers. If that is the case, there should be little impact of reticence on preference for texting because, theoretically, reticence is associated with communication with strangers and others not well known. Yet in situations involving greater potential for negative evaluation or face threat, reticent and non-reticent individuals may differ on a preference for sending a text message or handling the situation face-to-face. Therefore, the following research questions were posited:

RQ2: Is there a relationship between reticence and types of relational partners (i.e., friends, romantic partners, family, casual acquaintances) with whom they text?

RQ3: Do reticent and non-reticent individuals differ in preference for text messaging over face-to-face communication across the types of text message content?

Method

Participants

Participants ($N=245$) were selected from introductory and upper level communication, psychology and English courses at a small private women's college, and a mid-size private university both in the Northeast.. There were 192 females (78.4%) and 53 males (21.8%). Of the total sample 152 students (62%) were from the private university and 93 students (38%) were from the women's college. The age of the sample ranged from 17 to 47 with a mean age of 19.8 ($SD = 3.21$). All of the participants ($N = 245$), owned a mobile phone and of the total ($N= 245$), 223 (91.0%) utilized the text message feature on their phones and 22 (9.0 %) did not text.

Instruments

The survey packet (Appendix A) consisted of four parts. The first part included items about cell phone ownership and usage of text messages on a daily and weekly basis. The section also included items measuring the gender and age of the participants.

The second part of the packet was the Reticence Scale-12 (RS-12), a shortened version of the Reticence Scale (Keaten, et al., 1997). This scale measures the level of reticence along six dimensions of social interaction. "The RS-12 measures the level of reticence along six dimensions (two items per dimension) of reticence experienced in feelings of anxiety, knowledge about topics, timing skills, organization of thoughts, delivery skills and memory" (Kelly, er al., 2007, p.11). Previous research utilizing this measure has proven this to be a reliable measure of reticence (Kelly et al., 2007). Alpha reliability of the RS-12 for this study was high (.86). The mean and standard deviation was: $M = 29.07$ and $SD = 6.60$. This study was consistent with norms suggested in previous research; $M = 29.63$ and $SD = 7.097$.

The third part of the packet was the Text Message Content measure consisting of two parts: the Content Frequency Scale and the Content Preference Scale. This measure was developed for the purpose of this study and assessed the content of text messages. The measure was developed through reviewing the scholarly literature on text messaging and noting the various types of messages researchers discussed. Participants were asked to respond to 25 items measuring types of messages sent. On the Content Frequency Scale, response options consisted of: (1) = never, (2) = once, (3) = a few or quite a few times, and (4) = daily or almost daily and measured the frequency of the types of text messages sent. On the Content Preference Scale, response options consisted of: (1) = strongly prefer texting, (2) = somewhat prefer texting, (3) = somewhat prefer face-to-face communication and (4) = strongly prefer face-to-face communication and measured the preference for texting over face-to-face communication along the types of messages.

The Content Frequency Scale was factor analyzed using Principal Component Analysis with oblique rotation. Initially six factors with eigenvalues greater than 1.0 were extracted. Inspection of the factor matrix revealed a number of items with weak loadings ($<.40$). These items were eliminated (#'s 5, 8, 9, 11, 12, 14, 17, 19, and 22). The factor analysis was rerun and produced four factors with eigenvalues greater than 1.0 and accounted for a total of 56.1% of the variance. The fourth factor was ultimately discarded because the two items (#'s 7 and 20) produced a low reliability ($\alpha = .62$) and the factor was not interpretable. The first factor, labeled Greet, was comprised of four items such as "say hi" and "keep in touch" and produced low but

acceptable reliability ($\alpha = .64$). The second factor, labeled Locate, was comprised of four items such as “coordinate activities” and “arrange to meet people” and achieved a reliability of ($\alpha = .77$). The third factor, labeled Relate, consisted of four items such as “manage relational problems” and “break up with someone” and achieved a reliability of ($\alpha = .71$). Means and standard deviations for the three Content Frequency Scale dimensions were: Greet $M = 2.79$, $SD = 0.69$; Locate $M = 3.10$, $SD = 0.69$; Relate $M = 1.79$, $SD = 0.65$.

The Content Preference Scale was factor analyzed using Principal Component Analysis with oblique rotation. Initially six factors with eigenvalues greater than 1.0 were extracted. Inspection of the factor matrix revealed a number of items with weak loadings ($<.40$). These items were eliminated (#'s 6, 12, 14, 16, 18, 19, 21, 24, and 25), and then the factor analysis was rerun, producing four factors with eigenvalues greater than 1.0, (See Table 3), and accounting for a total of 56.3% of the variance. The first factor, labeled Coordinate, was comprised of six items such as “coordinate activities” and “arrange to meet people” and produced a reliability of ($\alpha = .80$). The second factor, Small Talk, was comprised of four items such as “say hi” and “keep in touch” ($\alpha = .71$). The third factor, Date, consisted of two items such as “arrange a first date” and “ask someone out” and produced a reliability of ($\alpha = .71$). The fourth factor, labeled Gossip, was comprised of four items such as “share personal news” and “send jokes” ($\alpha = .60$). Means and standard deviations for the four Content Preference Scale dimensions were: Greet $M = 2.88$, $SD = 0.69$; Locate $M = 2.50$, $SD = 0.66$; Date $M = 3.48$, $SD = 0.74$; Gossip $M = 3.10$, $SD = 0.60$.

The fourth and final part of the questionnaire was the Affect for Communication Channels Scale (ACCS; Kelly & Keaten, 2007). This measure was modified to replace e-mail as the target channel with texting. The measure was designed to assess individuals' affect for a particular medium. The original measure assessed affect for email (Kelly & Keaten, 2007), but Kelly et al. (2007) tested the same measure targeting instant messaging instead of e-mail. “Individuals develop positive or negative affect towards channels of communication through their experiences with and perceptions of these channels” (Kelly & Keaten, 2007, p. 350). The dimensions of the ACCS were: Increased Preparation and Control (IPC) (with e-mail), Enhanced Meaning and Emotion (EME) (with face-to-face), and Reduced Anxiety and Inhibition (RAI) (with e-mail) (Kelly & Keaten, 2007). Both studies have demonstrated the reliability of this measure with internal consistency estimates for each dimension utilizing Cronbach's alpha: IPC (.93), RAI (.77), and EME (.81) (Kelly & Keaten, 2007).

For the current study, participants were asked to record their agreement with 21 statements which compared their affective predisposition associated with text messages versus face-to-face communication utilizing a 5-point likert scale. The response options were: (1) = strongly disagree, (2) = disagree, (3) = agree and disagree, (4) = agree, and (5) = strongly agree. Alpha reliabilities for this study were acceptable for each dimension at (.93) IPC, (.88) EME, and (.84) RAI. Means and standard deviations for the three dimensions of ACCS were: IPC $M = 22.5$, $SD = 5.89$; RAI $M = 17.1$, $SD = 5.50$; EME $M = 29.3$, $SD = 5.0$; ACCS overall, $M = 69.14$ $SD = 10.38$.

Procedures

The survey packet was distributed during classes in the beginning of the fall semester of 2007. A cover letter, approved by the Human Subjects Committees at both schools, explained the overall purpose of the study and informed participants that their responses were anonymous and that they were allowed to withdraw at any point during the study. The surveys took approximately fifteen minutes to complete.

Results

First, independent sample t-tests were conducted to determine if there were any significant differences between the two schools on the measures of reticence and the ACCS. Since there were no significant differences between the schools on these scales, the two samples were combined for all further analyses. Components Factor Analyses were computed on the two text message content scales: Content Frequency and Content Preference. Then alpha reliabilities were calculated to ensure that all measures had acceptable reliabilities. Descriptive statistics, including means, standard deviations and percentages were also calculated for all measures. A significance level of .05 was set for all statistical tests.

Initially, descriptive statistics were calculated to assess how often and with whom participants communicated via text messaging. Results indicated that participants vary in how often they text the four types of relationship partners: (friends, family, romantic partners, and casual acquaintances). Findings regarding texting friends indicated that only 2 (.8 %) sent no messages to friends, 13 (5.3%) sent 1-5 messages per month, 30 (12.2%) sent 1-10 messages per week, 45 (18.4%) sent 1-7 messages per day, 75 (30.6%) sent 8-20 messages per day, and 59 (24.1%) sent more than 20 messages per day. Thus, over half of the participants (54.79%) used texting extensively with friends (i.e., 8 to more than 20 messages per day). Results for texting family revealed that 47 (19.2%) do not text family, 69 (28.2%) sent 1-5 messages per month, 65 (26.5%) sent 1-10 messages per week, 33 (13.5%) sent 1-7 messages per day, 7 (2.9%) sent 8-20 messages per day, and 2 (.8%) sent more than 20 messages per day. These results illustrate that texting is used with family members but to a much lower extent than with friends.

Texting romantic partners results indicated that 43 (17.6%) did not text romantic partners, 16 (6.5%) sent 1-5 messages per month, 32 (13.1%) sent 1-10 messages per week, 45 (18.4%) sent 1-7 messages per day, 47 (19.2%) sent 8-20 messages per day, and 39 (15.9%) sent more than 20 messages today. Over half of the respondents (53.59%) sent from 1 to more than 20 messages daily. Findings regarding texting casual acquaintances revealed that 106 (43.3%) did not text casual acquaintances, 64 (26.1%) sent 1-5 messages per month, 40 (16.3%) sent 1-10 messages per week, 6 (2.4%) sent 1-7 messages per day, 5 (2.0%) sent 8-20 messages per day, and 2 (.8%) sent more than 20 messages per day. These results suggest that texting is used much less frequently in casual acquaintance relationships compared to the other three types.

H1 predicted reticence is positively related to the ACCS dimensions of Reduced Anxiety and Inhibition and Increased Preparation and Control and negatively related to the ACCS dimension of Enhanced Meaning and Emotion for the communication channel of text messages. Pearson correlations were calculated to test the relationship between reticence and affect for texting. Significant ($p < .01$) positive correlations were obtained between reticence and two dimensions of the ACCS (see Table 1). As predicted, Increased Preparation and Control (IPC) and Reduced Inhibition and Anxiety (RAI), were positively related to reticence. The correlations were modest and explained between 7% and 9% of the variance. As hypothesized, a negative correlation was found between reticence and the Enhanced Meaning and Emotion (EME) dimension of the ACCS, $r = -.18$, $R^2 = .032$. H1 was supported.

Table 1
Correlations between ACCS Dimensions and Reticence

Dimension	r	R ²
IPC Increased Preparation and Control	.30	.09
RAI Reduced Anxiety and Inhibition	.27	.073
EME Enhanced Meaning and Emotion	-.18	.03

H2 predicted a positive relationship between reticence and frequency of text messages as a medium of communication within the social network. Pearson correlations were also calculated to test the relationship between reticence and frequencies of text messages exchanged with family, friends, casual acquaintances, and romantic partners. A significant ($p < .01$) negative correlation was obtained between reticence and the frequency of texting between romantic partners, $r = -.17$, $R^2 = .03$. H2 was not supported as there was not a significant positive relationship between reticence and frequency of text messages within the social network.

RQ1 stated: Do reticent and non-reticent individuals differ in the content of text messages sent? To form reticent groups (high vs. low) a median split procedure was used (median = 29.0), resulting in 109 low reticent individuals and 93 high reticent individuals. T-tests were calculated to determine if the two groups differed on the Content Frequency dimensions extracted from the factor analysis, Greet, Locate and Relate. None of the differences were significant ($p > .05$). The two groups, high and low reticent, did not differ in the frequency of text messages sent across the Content Frequency dimensions.

RQ2 stated: Is there a relationship between reticence and the types of relational partners (i.e., friends, romantic partners, family, casual acquaintances) with whom they text? Chi Square analyses were computed to test the relationship between reticence and texting partners (friends, family, casual acquaintances, and romantic partners). A median split procedure was used to categorize reticence into high and low groups (same as before). Two groups were formed for family, romantic partners and casual acquaintances: one group consisted of those who responded that they do not text within that category of relationships. The second consisted of those who do text, regardless of amount within each category of relationship. For friends the groups were dichotomized differently, group 1 consisted of 1-7 messages sent per day, and group 2 consisted of 8 or more messages per day. Only one Chi Square analysis produced a significant result. Low reticent individuals were significantly more likely than high reticent individuals to use texting within romantic relationships, $\chi^2(1) = 5.04$, $p < .05$ (see Table 2).

Table 2
Relationship between Reticence and Texting of Romantic Partners

Reticence	No Texting	Texting	Total
Low	15	95	110
	13.6%	86.4%	
High	25	71	96
	26.0%	74.0%	

$$\chi^2 = 5.04, df = 1, p = .025$$

RQ3 stated: Do reticent and non-reticent individuals differ in preference for text messaging over face-to-face communication across the types of text message content?

As for RQ1, a median split procedure was used (median = 29.0) to form high ($n = 90$) and low ($n = 109$) reticent groups. T-tests were calculated to determine if the two groups differed on the Content Preference dimensions extracted from the factor analysis, Small Talk, Coordinate, Date, and Gossip. None of the differences were significant ($p > .05$). The two groups, high and low reticent, did not differ in the preference for text messages over face-to-face communication across the Content Preference dimensions. The preference was for face-to-face communication with certain messages, “arrange a first date”, “ask someone out”, and “break up with someone”, even if a negative outcome could be associated with that message.

Discussion

This study examined the relationship between reticence and the utilization of text messages. Because text messages are similar in some respects to other forms of computer-mediated communication in that they are text-based, reticent individuals may prefer them to the voice calling feature of mobile phones. Reticent individuals may find that technology buffers them from the anxiety they experience in face-to-face communication. Although they are not more likely to use texting than their non-reticent counterparts, they are comparable in their use of texting for communication purposes. Results of this study support three conclusions.

First, reticent individuals appear to have positive affect for texting as a means of communication. Texting allows for an increase in time to think about the message before composing it and editing it before it is sent. This, along with lowered anxiety, contributes to the positive affect by reticent individuals for texting. This study also found a negative relationship between reticence and the Enhanced Meaning and Emotion (for face-to-face) dimensions of the ACCS. These findings are consistent with the Kelly and Keaten (2007) study of reticence and affect for email and the Kelly et al. (2007) study of reticence and affect for instant messaging. The Kelly and Keaten (2007) study, which focused on affect for email, found correlations between reticence and IPC of .25, RAI, $r = .30$ and EME, $r = -.26$, which are comparable to the current study correlations of IPC, $r = .30$, RAI, $r = .27$ and EME, $r = -.18$. The Kelly et al.

(2007) study of affect for instant messaging produced correlations which were also comparable to the current study: IPC, $r = .23$, RAI, $r = .23$, and EME, $r = -.21$. The results of the present study support the consistent finding of reticent individuals preferring mediated channels, but contribute to the literature by focusing on the mediated channel of texting,

This study also examined the relationship between reticence and texting partners (friends, family, romantic partners, and casual acquaintances). The second conclusion is that low reticent and high reticent individuals do not appear to differ in texting partners with the exception of romantic partners. Low reticent individuals were more likely to text romantic partners. Perhaps high reticent individuals were less likely to be involved in romantic relationships due to their fears of communication and avoidance of interaction that pose too much potential for negative evaluation. A possibility is that romantic relationships pose too much potential for negative evaluation and face threats and so, even with mediated channels, they avoid it.

Finally, reticence appears to be unrelated to the content of text messages and to preference for texting over face-to-face communication across the content categories. Reticent and non-reticent participants did not differ in terms of using texting to greet or locate other or to engage in relational communication. Nor did the two groups differ in their preference for texting versus face-to-face for making small talk, asking someone out, coordinating or gossiping. Perhaps this is because the sample was not highly reticent. All of the participants owned a mobile phone and of those who utilized the texting feature, reticents and non-reticents were just as likely to text for the same content.

Results of this study are consistent with the Ling (2004), Ling et al. (2002, 2005) and Kasesniemi and Rautiainen (2002) studies on text messaging in terms of the types of content of text messages. The Ling (2004) study identified the types of messages sent as coordination, information, and personal news. Moreover, the Ling et al. (2002) study suggested that coordinating activities are a basic social function of text messages. The Ling et al. (2005) study indicated that individuals text to coordinate activities, send simple greetings, or ask questions. The Kasesniemi and Rautiainen (2002) study suggested that through text messaging, teens hate, gossip, and love and mediate, and the findings of this study reinforce what has been found already.

This study contributes to the ongoing research on reticence and mediated channels of communications. Previous research has suggested that individuals who experience communication anxiety problems like reticence exhibit a preference for mediated channels of communication. Reticent individuals who tended to exhibit positive affect towards mediated channels of communication were more likely to use it as a way of communicating (Kelly & Keaten, 2007). This study supported this in that reticent participants indicated positive affect for texting, a mediated channel, due to increased preparation time and control and a reduced feeling of anxiety.

There is a depersonalization that occurs in communication through mediated channels, such as texting, because there is no physical presence of others. Ling (2004) suggested that a user can carefully edit the message before sending it, rather than fluster through an awkward phone call. Kasesniemi and Rautiainen (2002) suggest texters have two personalities: a brave one when conversing via text and a more reserved one during face-to-face communication. These researches also suggest that individuals are able to do things through texting that they fear in the real world. Because texting is an indirect channel, face threats and fear of negative evaluation are reduced. Reid and Reid (2004) suggests that "for a significant number of users, sending a text message may be more important for building and maintaining social relationships than

coordinating practical arrangements” (p.2). Keaten et al. (2006) suggested that reticent individuals differ from others because of their “excessive worry about the potential for negative outcomes when communicating, especially the possibility of appearing foolish” (p.144).

This study had several limitations. The first is that the sample was not a highly reticent sample. Of the total sample ($N= 245$), the mean reticence score out of a maximum of 53 was 29.0. It is possible that the non-significant results were in part attributable to the sample not being highly reticent. The second limitation concerns some of the measures developed for this study. The Content Message Measure with the two parts (the Content Frequency Scale and the Content Preference Scale) had two response columns and the change in the response options might have made it more difficult to answer and may have confused participants. The second is that some of the message types were too confusing in the way they were worded and many participants skipped over these messages. Some of the examples were “manage relational problems”, and “manage daily concerns”. Participants also indicated that on some of the messages, they prefer both texting and face-to-face; however they were instructed to only choose one. Future research should refine the Text Messaging Content Measure, validating it and its dimensions.

Future research should continue to examine reticence and the use of text messages again. Since texting is a relatively new technology, limited research has been conducted on this medium and reticence or communication anxiety problems. Future research should also look at reticence, texting, and multi-media messaging (MMS). Multi-media messages are the new form of text messaging and combine pictures, videos, and text in one message. Future research could also observe how and if reticent individuals utilize text messaging or other mediated channels to establish or develop new relationships.

Overall the various studies reviewed suggested that communicatively anxious individuals exhibit a preference for forms of computer-mediated communication. The increased feeling of comfort in a mediated environment leads to an increase in certain social skills and more opportunities to develop relationships both on and off-line. The present study suggests that reticent individuals have positive affect for texting, they do not text any less than non-reticent individuals, and they do not differ in their preference for texting. They do differ on texting partners, specifically romantic partners.

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