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ROMANTIC RELATIONSHIP QUALITY AND TECHNOLOGICAL  
COMMUNICATION: EXAMINING THE ROLES OF ATTACHMENT  
REPRESENTATIONS AND REJECTION SENSITIVITY

by

Ron C. Bean

A thesis submitted in partial fulfillment  
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

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Logan, Utah

2015

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## ABSTRACT

Romantic Relationship Quality and Technological Communication: Examining the  
Roles of Attachment Representations and Rejection Sensitivity

by

Ron C. Bean, Bachelor of Science

Utah State University, 2015

Major Professor: Renee V. Galliher, Ph.D.  
Department: Psychology

Understanding normative developmental patterns in romantic relationships within cultural-historical contexts is a vital research agenda, and contemporary relationships develop amid pervasive socio-technological advancements. The role of technology in relationship functioning is relevant as romantic relationships are among the most important types of relationships and technology may substitute proximity, a core imperative of the attachment system. This study described patterns of computer-mediated communication (CMC) in young adult romantic relationships. Specifically, we hypothesized that core relational and personality constructs were linked to participants' interpretations and reactions to CMC.

Participants were 97 college students who provided global scores for rejection sensitivity, attachment representations, relationship satisfaction, and data about CMC with their romantic partner. Participants were prompted twice daily for two weeks to

respond to questions assessing the nature and reaction to their most recent CMC with their romantic partner. Participants used texting more than any other CMC and communicated with romantic partners more than all others combined. Participants' high relationship and communication satisfaction remained relatively constant. The 97 participants completed 1,616 mobile responses. Reported response latency was higher for men than women. Significant negative correlations emerged between interaction ratings, rejection sensitivity, and both insecure attachment dimensions. Regression analyses revealed only main effects for response latency and insecure attachment in predicting interaction ratings for women. No significant interactions emerged between response latency and attachment/response latency. For men, insecure attachment representations and rejection sensitivity demonstrated direct effects on interaction ratings. Avoidant attachment and response latency demonstrated a statistically significant interaction. Response latency and the interaction rating were negatively related only for men who scored low in avoidance. This study contributes to the body of literature assessing outcomes and qualities of romantic relationships in emerging adulthood. Technological communication is a key feature of young couples' communication and appears more prevalent in romantic relationships than other relationships. Additionally, core relational and personality characteristics are substantially correlated to interpretations of moment-to-moment interactions via technology.

## PUBLIC ABSTRACT

Romantic Relationship Quality and Technological Communication: Examining the  
Roles of Attachment Representations and Rejection Sensitivity

by

Ron C. Bean

It is important to understand normal developmental patterns in romantic relationships, which develop within historical and cultural contexts and are influenced by social and technological advancement. One of the core features of developing attachment in romantic relationships is proximity to the attachment figure, for which technology may be a substitute. This study described patterns of computer-mediated communication (CMC) in young adult relationships. We hypothesized that core relational and personality features were linked to participants' interpretations of CMC.

For this study, 97 college students provided overall scores for rejection sensitivity, insecure attachment styles, relationship satisfaction, and data about CMC with their romantic partner. Participants were prompted twice daily for two weeks to respond to questions assessing the nature and reaction to their most recent CMC with their romantic partner. Participants used texting more than any other CMC and communicated with romantic partners more than all others combined. Participants' high relationship and communication satisfaction remained relatively constant. The 97 participants completed 1,616 mobile responses. Lower scores on rejection sensitivity and anxious or avoidant

attachment dimensions were related to higher ratings of the interactions. Reported response latency, the time one has to wait for a response, was higher for men than women. For women, faster responses were directly linked to higher interaction ratings. Response latency and the interaction rating were negatively related only for men who scored low in avoidance

This study contributes to the body of literature assessing outcomes and qualities of romantic relationships in emerging adulthood. Technological communication is a key feature of young couples' communication and appears more prevalent in romantic relationships than other relationships. Additionally, core relational and personality characteristics are substantially related to interpretations of moment-to-moment interactions via technology.

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Ron C. Bean



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## **CHAPTER I**

### **INTRODUCTION**

Among the most critical of developmental tasks marking entry into adulthood is the establishment of intimacy in a romantic relationship (Eryilmaz & Atak, 2011; Rauer, Pettit, Lansford, Bates, & Dodge, 2013). The inability to form and maintain a committed intimate relationship is thought to hinder emotional development (Erikson, 1968), predict both physical and emotional distress (Conger, Cui, Bryant, & Elder, 2000), and negatively influence psychological well-being throughout life (Kiecolt-Glaser & Newton, 2001; Lanz & Tagliabue, 2007; Rauer et al., 2013). Approximately 90% of all adults eventually marry, with more than half resulting in divorce or experiencing high rates of conflict and unhappiness. Furthermore, marital distress, dissolution, or other relationship difficulties related to living together can have strong, negative, emotional, social, behavioral, economic, and even physical consequences for children (Conger et al., 2000). Understanding the normative developmental sequence of romantic relationships is vital: developmental processes take place within cultural and historical contexts (Bronfenbrenner, 1981), and contemporary relationships develop within the context of rapid and pervasive socio-technological advancements. The role of technology in relationship functioning is highly relevant, as romantic relationships are one of the most intimate and influential types of close relationships (Morey, Gentzler, Creasy, Oberhauser, & Westerman, 2013) and technology may provide a substitute for proximity, a potential core component for romantic relationships and a primary goal of the attachment system (Péloquin, Brassard, Lafontaine, & Shaver, 2014).

One important factor in development is attachment. Individuals with more secure attachment styles are likely to experience more stable relationships, trust partners more, and experience fewer negative interpersonal emotions. In contrast to secure attachment, some individuals develop an anxious attachment style in response to unresponsive, inconsistent, or harsh treatment by caregivers in childhood, which leads to higher distress levels and a need for attachment figures to be more readily available. This attachment style tends to extend to romantic relationships, in that securely attached individuals enjoy fewer conflicts and greater emotional stability, while insecurely attached individuals experience a lack of trust and a potential fear of closeness as a result of being more skeptical about relationship durability (Furman & Rose, 2015).

One's views and preferences with regard to romantic relationships begin forming through experiences in adolescence and young adulthood. The quality and satisfaction in future relationships depends on the shaping experiences of youthful romantic experience. Experiences across multiple relationships grant opportunities to shape personal characteristics and become familiar with preferences in relationships through the context of developing communication skills and managing a wide variety of emotions (Furman & Rose, 2015).

A potential result of negative interpersonal responses by caregivers is the development of sensitivity to rejection, or anxiety related to potential or perceived rejection, especially since those capable of issuing the most damaging rejection are those to whom the anxious individual feels the closest connection. To compound the problem, those expecting rejection may act in ways that distance themselves from their romantic

partner, leading to the very rejection they feared. This self-fulfilling prophecy may be the result of heightened vigilance in watching for clues of rejection, which might be everywhere for those with high rejection sensitivity. To avoid feelings of the fear of rejection, an individual with high rejection sensitivity might engage in self-silencing, or act in ways contrary to one's own values in order to avoid conflict (Downey & Feldman, 1996; London, Downey, Romero-Canyas, Rattan, & Tyson, 2012).

Understanding attachment and rejection sensitivity constructs and how they relate to romantic relationship development and maintenance in the context of evolving technological capability will help provide a better understanding of the relationships between attachment style and factors related to computer-mediated communication (CMC). A factor that needs increasing and immediate attention is the nature of modern communication. Technology is influencing everything we do and changing rapidly; cell phone use and CMC are rising every year in nearly all demographics (Duggan & Smith, 2014). With regard to the effects of new media for communication on relationships, questions often exceed answers. Benefits and drawbacks of these new forms of communication are hotly debated and difficult to evaluate as communication is evolving at a pace never-before-seen (Coyne, Stockdale, Iverson, & Grant, 2011; Duggan & Smith, 2014; Klein, 2013; Kohut et al., 2012; Whitty, 2008).

Despite the knowledge about early interpersonal experiences and attachment styles provided by previous research, relatively little is known about how the rapidly evolving nature of communication technology influences these processes. With the ability to carefully consider a reply behind a screen, rather than the instant demands

placed on an individual through face-to-face and real-time communication, it is easy to see how some may use the ability to their advantage by promoting a self-image they choose, and why some may interpret the latency at which the response arrives as a sign of trouble. Therefore, as little is known about the current landscape of today's communication, this study will seek to describe the process of computer-mediated communication. The patterns of interaction, the amount of and types of usage, and the impacts on relationship satisfaction will be investigated. In addition, response latency, or the amount of time that passes while waiting for a response, becomes a new variable in interpersonal, computer-mediated communication.



## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

This review of the literature focuses on previous work relevant to romantic relationship development and technology use. The literature review begins with developmental aspects of childhood and adolescence that shape romantic experiences in adulthood, specifically attachment styles and rejection sensitivity. Then, as technology is increasingly pervasive in 21<sup>st</sup> century life, understanding the effects of technology use is in its infancy, especially as technology growth seems to outpace research publication. Therefore, this project explored computer-mediated communication (CMC) in an attempt to understand the potential positive and negative effects on the individual and the relationship. Finally, response latency, or the time it takes for a romantic partner to respond to a new message, is a construct that is, to the researcher's knowledge, uninvestigated and therefore becomes a focus for this research project.

#### **Developmental Considerations in Romantic Relationships**

The developmental tasks of adolescence and young adulthood grant opportunities for youth to shape their views through dating experiences. These opportunities influence the expectations and experiences in future romantic relationships by providing a context for developing communication and managing emotions with romantic partners, including emotionally intense situations (Madsen & Collins, 2011). Madsen and Collins found that positive adolescent dating quality was a predictor for smoother relationship process and lower negative affect in future romantic relationships. Future social functioning and

beneficial personal characteristics can be facilitated by the skills associated with positive dating experiences, like initiating dates and recovering from rejection. Dating frequency and the quality of the relationship with romantic partners throughout adolescence predicted the quality of relationships in young adulthood more so than early experiences with parents or peers. These benefits do not appear to be gender specific (Madsen & Collins, 2011).

According to Carver, Joyner, and Udry (2003), the age span during which individuals engage in premarital romantic relationships has lengthened to over a decade, due to the rising age of first marriage and earlier entry into romantic relationships. As a result, Rauer et al. (2013) stated, “adulthood itself has become a moving target for most individuals with greater interindividual variability emerging in the timing and content of developmental milestones” (p. 2159). These milestones are acquired through experience, and the amount of experience required to enter into and maintain a committed relationship varies based on previous groundwork in familial and social peer relationships (Conger et al., 2000; Connolly, Furman, & Konarski, 2000; Madsen & Collins, 2011).

### **Attachment Style as a Foundation**

Attachment theory posits that interactions with early caregivers, particularly parental response to the child’s distress, lead to the development of attachment style. Early relationships serve as a template for individuals to base future interactions and serve to guide the manner in which individuals approach relationships. Bowlby’s (1976) theory of attachment is a result of observations of infants and young children when separated from their primary caregivers for various lengths of time. Bowlby summarized

his theory of attachment using three propositions. The first proposition relates to the individual's confidence that an attachment figure will be available to him or her when desired; the individual who is confident in the availability of his or her attachment figure will be less prone to intense or chronic fear than an individual without such confidence. The second proposition posits that the previously mentioned confidence, or lack thereof, builds slowly during infancy, childhood, and adolescence, and the expectations developed during the formative years persist relatively unchanged throughout the individual's life. Bowlby's third proposition was that the individual's developed expectations regarding accessibility and responsiveness during the formative years are "tolerably accurate reflections" of the individual's actual experience with attachment figures (p. 235).

In adulthood, attachment style therefore reflects relatively stable behavioral patterns in relationships. The ideal attachment style is termed "secure attachment" and those with more secure attachment tend to develop more stable long-term relationships marked with fewer negative emotions and greater trust, more mutual dependence, dedication, a more positive orientation toward love and others, confidence in relationships, and subsequently, greater relationship satisfaction (Dillow, Goodboy, & Bolkan, 2014; Hazan & Shaver, 1987; Morey et al., 2013). Additionally, securely attached individuals tend to be more "comfortable with dependence on a partner while maintaining a unique identity and separate interests" (Reynolds, Searight, & Ratwick, 2014, p. 496).

If, however, the child experiences inconsistent, harsh, or unresponsive caregiving,

the child may develop hypervigilance and therefore experience difficulty in establishing a sense of security. This pattern can lead to the development of anxious attachment, which is marked by a likelihood to exhibit higher distress levels, a greater desire for attachment figures to be close or more readily available, jealousy, and a desire for reciprocation of feelings. Anxiously attached individuals also tend to be excessively concerned about the availability and dependability for others to meet their attachment needs (Dillow et al., 2014; Reynolds et al., 2014). Furthermore, Hayes, Pistorello, and Levin (2012) stated that once a verbal human learns a behavior, that behavior is never fully unlearned.

In addition to anxious attachment, other children may develop a pattern of avoidant attachment in response to maladaptive responses from caregivers, evidenced by doubt about romantic love, orientation away from love or others (Dillow et al., 2014), discomfort with emotional closeness, and difficulty trusting partners (Reynolds et al., 2014). Avoidant attachment occurs when the child learns to inhibit feelings of distress in response to a withdrawn caregiver. Avoidantly attached individuals tend to exhibit discomfort with intimacy, are less supportive of their partners (Collins & Feeney, 2000), and thereby have less relationship satisfaction and stability. Decreased investment of emotion and intimacy likely explains lower levels of distress upon relationship dissolution among avoidant-attached individuals (Jin & Peña, 2010; Morey et al., 2013).

Hazan and Shaver (1987) investigated attachment styles in the context of romantic relationships. They hypothesized that “the most important love experience of a secure adult would be characterized by trust, friendship, and positive emotions,” which was supported by their first study (p. 513). For avoidant adults, love was expected to be

marked by fear of closeness and lack of trust. Hazan and Shaver further predicted that avoidant adults would be more skeptical about the existence and durability of romantic love and more likely to believe their happiness was not dependent on a romantic partner, even though Hazan and Shaver also predicted that avoidant and anxious/ambivalent individuals would be especially vulnerable to loneliness due to their needs not being fully met. Results of their first study showed that avoidant lovers demonstrated a fear of intimacy, jealousy, and emotional turbulence. Avoidant participants further reported that romantic love as seen in novels and the movies was not realistic and finding a person with which one could really fall in love was rare, and even then seldom lasts.

Few studies have sought to explore the relationship between technology use and attachment, which is especially important as attachment is intricately connected with the reasons one prefers or tries to establish various levels of availability and intimacy with others (Morey et al., 2013). This information is especially important, as technology use is becoming less of a novelty and increasingly woven into the social tapestry of living in the 21<sup>st</sup> century.

### **Rejection Sensitivity**

According to Downey, Freitas, Michaelis, and Khouri (1998), rejection sensitivity (RS) is the “anxious expectation of rejection in situations that afford the possibility of rejection by significant others” (p. 545). When someone perceives that another person has the ability to help or hinder their achievement of important goals, it is easy to understand the concern for how one feels they are perceived by that person, since acceptance is widely acknowledged to be a universal goal (Downey & Feldman, 1996; London et al.,

2012). With regard to the goal of finding a stable romantic relationship, early peer, parental, and romantic interactions can be relevant for the development of the sensitivity to rejection. Experiences of rejection by parents and peers in middle childhood and adolescence place the person at increased risk for emotional maladjustment and symptoms of depression (Bernstein & Benfield, 2013; Downey & Feldman, 1996; Madsen & Collins, 2011; Zimmer-Gembeck et al., 2013).

A problem for those with lower levels of self-esteem is the tendency to expect higher levels of rejection, where people with higher self-esteem tend to have higher estimates of their partner's positive feelings for them (Romero-Canyas & Downey, 2013). As there have been no findings relating RS to positive interpersonal interpretations, it seems RS is solely related to interpersonal negativity (Romero-Canyas & Downey, 2013). The expectations of rejection may make people behave in ways that elicit rejection from others in the form of excessive neediness, heightened vigilance, dejection, jealousy, reactive aggression and hostility, and the tendency to assume that partners will be unresponsive; behaviors that prioritize protecting the self, but are antithetical to relationship success (Bernstein & Benfield, 2013; Downey & Feldman, 1996; London et al., 2012). These expectations of being rejected increase a readiness to perceive rejection, which they tend to see everywhere (Downey et al., 1998; Downey & Feldman, 1996; Romero-Canyas & Downey, 2013; Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010). Downey et al. (1998) further conceptualized rejection sensitivity as “the disposition to anxiously expect, readily perceive, and overreact to rejection from significant others” (p. 556).

For those who are high in rejection sensitivity, perceived cues increase the expectations of rejection, which then increases anxiety and depression (Bernstein & Benfield, 2013; Downey & Feldman, 1996). This, in turn, increases anger, aggression (both verbal and nonverbal), hostility, and sometimes violence toward their partners, which creates a feedback loop leading to a self-fulfilling prophecy that ultimately results in the very rejection the person feared (Downey et al., 1998; Downey & Feldman, 1996; Romero-Canyas et al., 2010). People who are high in RS report more anxiety when faced with conflicts with romantic partners, especially for women who are more likely than are men to associate conflict with pessimism about the course and outcome of conflict in their relationship. Men who are high in RS are said to resort to fewer unilateral actions and attempt more efforts of resolution (Downey et al., 1998).

RS was also a strong indicator of feeling lonely and unloved after a relationship conflict and the belief that efforts to resolve the conflict would be unsuccessful (more so for women than for men). Downey et al. (1998) observed that partners of women with high rejection sensitivity were significantly angrier after a conflict than were partners of women with low rejection sensitivity; women high in RS engaged in significantly more negative behavior during conflict, which may exacerbate conflict. Furthermore, high RS women were more likely to experience conflict on days following those where they felt rejected by their partner (Downey et al., 1998; Downey & Feldman, 1996).

Especially for new relationships, people rely on their cognitive resources and self-regulatory resources to manage their responses to rejection, making RS a more salient factor with regard to relationship maintenance (Romero-Canyas & Downey, 2013). RS is

also related to social anxiety and avoidance, low self-esteem, and the fear of being evaluated negatively (Romero-Canyas et al., 2010).

Romero-Canyas et al. (2010) developed a dynamic, process-oriented model of RS based on two assumptions. The first is that attention to acceptance-rejection reflects the evolutionary need for social connectedness in order to survive. This assumption states that a social connection is vital to the maintenance of mental and physical well-being, and the threat of the removal of social connection is a means by which society influences its members to behave in socially acceptable ways. Romero-Canyas et al. further illustrated the particularly challenging nature of seeking acceptance because seeking acceptance involves subjecting oneself to potential rejection; therefore, those to whom one feels the best connection are able to also inflict the most damaging rejection.

The second assumption on which Romero-Canyas et al. (2010) based their research was the biopsychosocial nature of acceptance and rejection. Because of our inherent biological sensitivity to threat, we learn to expect either acceptance or rejection through our experiences in life, including exposure to familial violence, overly punitive parents, or conditional love from parents. This learning makes it possible for our responses to rejection anxiety to be person specific, specific to certain groups or situations, or related to certain features of the self in specific contexts. Furthermore, the tendency to overestimate one's partner's lack of interest or hostility from vague cues suggests RS is not related to accuracy in identifying and distinguishing differences between emotional facial expression (Romero-Canyas & Downey, 2013).

The fear of rejection can also lead to other behaviors including self-silencing, or



suppressing one's own opinions (London et al., 2012). The fear of rejection may also influence willingness to engage in behaviors that are unwanted or that are contrary to one's own values (Romero-Canyas et al., 2010). Lastly, the fear of rejection may also lead to an individual setting aside personal desires to avoid conflict (Ayduk, May, Downey, & Higgins, 2003).

### **Modern Technology as a Relationship Factor**

Technology is rapidly transforming almost every aspect of daily life. According to the Pew Research Center (Duggan & Smith, 2014), each year brings new levels of advancement and ingenuity. Mobile access to the Internet is increasingly relevant, and Internet access using cell phones is becoming increasingly common. Sixty-three percent of individuals report accessing the Internet on cell phones, an 8% rise from 2012. One in five reported being "cell-mostly" Internet users. Considering that 91% of all adults have cell phones, this means that 57% of the entire population of the U.S. accesses the Internet using a cell phone. Young adults are reported to be the demographic most likely to go online, using their phone at 85%; those with a college degree are also more likely to report Internet cellular usage (74%) than are those without a college degree (67%).

Researchers have not adequately investigated specific reasons for using different methods of communication. What makes one choose to convey a message through texting rather than a phone call or a Facebook post? According to Kohut et al. (2012), 67% of U.S. adults use text messaging. Additionally, 57% report using cell phones to take pictures or video, 43% report using cell phones for Internet access, and 96% make

regular cellular calls.

Almost three quarters of individuals in the U.S. with access to the Internet use social networking sites (SNS) and report that SNS, instant messaging, and texting are among the most preferred methods for communication (Davis, 2012). As of 2013, 73% of adults in the U.S. were members of at least one social networking site, while 42% reported using multiple networking sites. Facebook remains the most popular SNS with 71% reporting usage (up from 67% in 2012). Women are more likely than are men to be Facebook users with 76% reporting usage compared to men at 66%. Eighty-four percent of individuals aged 18-29 reported Facebook use. Sixty-three percent of Facebook users report visiting the site at least daily (Duggan & Smith, 2014).

Once the connection to the web is established, a plethora of opportunities exist. From researching school or work projects to social opportunities, the Internet provides a means for all interests. Many of these are prosocial, but some decidedly antisocial or potentially harmful avenues are also available. According to Klein (2013), technology is no longer merely a tool for entertainment, and CMC may convey a person's "deep wishes, expectations, desires, and fears in relation to their intimate relationships" (p. 157).

CMC use is common and it increases with every year and new form of technology. In 2011, over one billion text messages were sent through mobile phones around the world every single day. The majority of couples claim relationship benefits of texting, citing the ability to easily remain in contact with each other (Coyne et al., 2011). Those who are more skeptical of CMC suggest that online and technological ties are

“weak ties” and are not beneficial, while proponents believe the Internet provides an avenue for people to express themselves with less judgment that can be possible in face-to-face (FTF) interactions. Opponents also argue that CMC interferes with time that would be better invested into healthy offline relationships (Whitty, 2008). According to Gonzales (2014), “as anxieties about the negative effects of technology mount, so does evidence of potential benefits to mental and physical health” (p. 197).

With such ubiquitous use of technology, changes to the human experience are to be expected. These effects may be much different for those who are born into a digital world, or as Palfrey and Gasser (2008) call them, “Digital Natives,” and those who incorporate technology into their lives later, also known as “Digital Immigrants.” Texting is replacing FTF communication for many youth, especially among adolescents and young adults with social anxiety (Skierkowski & Wood, 2012). It is important to expand the limited, but rapidly growing, field of study to encourage prosocial results of technology use and to help minimize negative impacts that are to-date largely unknown.

According to Daft and Lengel (1986), a major consideration where communication is concerned, is media richness. “Media richness” assesses a number of factors to determine the comprehensive levels of various types of communication. Some of these factors include the availability of instant feedback, the ability for the medium to transmit multiple cues, the use of natural language, and the personal focus of the medium. Different channels of communication have differing levels of richness, based on the amount of information (vocal inflection, tone of voice, etc.) that can be acquired through using that channel. FTF communication involves the highest levels of richness as the

feedback is instantaneous and diverse channels may be used (Morey et al., 2013; Whitty, 2008), yet digital technology research reveals that CMC use “is not an impoverished substitute for meaningful face-to-face communication” (Gonzales, 2014, p. 202). A concern that critics of online communication reference is a low feeling of social presence due to fewer nonverbal and paralinguistic cues resulting in the individual’s self-perception being reduced and deindividuation being fostered. However, this lack of social presence is a benefit for some as it extends the ability to be more honest and open in cyberspace as CMC provides more chances to present oneself than does FTF communication (Gonzales, 2014; Whitty, 2008).

In the past, the only methods for maintaining communication between FTF interactions were via the telephone or mail, but as stated, a plethora of options now exists and the decision to use texting, for example, may indicate meaning that transcends the message content. This new phenomenon is illustrated by a complaint that someone “only” sent a text to mark an important event or terminate a relationship. Heavy CMC and texting usage is contributing to a debate between two opposing research hypotheses. Does CMC and texting support existing social ties, or is it an avenue of communication for those with diminished FTF skills (Klein, 2013)?

A major difference between CMC and FTF communication is that in CMC communication, people are able to be strategic in their self-presentation. They can take their time to decide what and how they want to communicate. This is especially true of asynchronous communication like texting and email. Taking the time to reflect on what they are trying to communicate and how they want to present themselves enables

individuals to present themselves in the most positive light. This ability to be strategic can lead to more close and intimate relationships, but it can also lead to idealization. Seeing someone in an idealized fashion, contrary to the way they really are, is likely not the most psychologically healthy way to sustain a relationship. Individuals also experience the newfound ability to participate in multiple conversations at the same time without disrupting others, making CMC multidimensional. Most young people report feeling unable to live without their phone, a demonstration about how deeply engrained in the social fabric computer-mediated communication has become (Skierkowski & Wood, 2012).

This leads to one of the biggest concerns with CMC, what is being called the online disinhibition effect (Suler, 2004). This concept illustrates the two-sided nature of CMC. As people are able to be more anonymous or deliberate in their communication, some tend to flirt more, and many disclose more and are more honest. There are two forms of online disinhibition, benign disinhibition, where fears, secrets, and real emotion are shared, and toxic disinhibition, where they seek out material, misrepresent themselves, and engage in relationship behaviors they otherwise would not (e.g., sexual activities; Suler, 2004; Whitty, 2008).

For online disclosers, CMC provides a safe avenue to disclose 'core' aspects about themselves they would not feel comfortable sharing in FTF contexts. This is especially an issue for new relationships. Online survey results revealed that those who reveal their true selves online consider these online relationships to be more important to their identity, possibly eliminating FTF contact. They also report feeling more free to

flirt, express more, and explore sexual opportunities (Whitty, 2008).

Previous studies have demonstrated positive correlations between higher Internet usage, social involvement, higher self-esteem, and psychological well-being (Gonzales, 2014; Whitty, 2008; Whitty & McLaughlin, 2007). Another interesting phenomenon is that when using CMC, people can develop closer relationships more quickly than they often do offline. Online contacts sometimes have the ability to offer more support and empathy than can offline social networks. According to Walther, Slovacek, and Tidwell (2001), “CMC users sometimes experience intimacy, affection, and interpersonal assessments of their partners that exceed those occurring in parallel FTF activities or alternative CMC contexts” (p. 109). Gonzales (2014) also found that there was “no significant difference between the meaningfulness of Internet and face-to-face communications” (p. 202).

According to Whitty (2008), lonely individuals demonstrated a greater likelihood of Internet usage, compared to less lonely individuals, for social activities like chatting or playing games. However, they did note that they were unable to discern whether these lonely individuals substituted the Internet for offline activities, or if the loneliness was a result of online activity. Whitty stated, “We should be mindful that loneliness is not defined in terms of an individual’s social network or number of friends, but rather as a subjective experience” (p. 1845). A study by Morahan-Martin and Schumacher (2003) showed that, compared to nonlonely individuals, using the Internet and email to make new friends and find people with similar interests with which to interact was higher among lonely individuals.

Typical psychosocial development of late adolescence and early adulthood may be enhanced by opportunities for social engagement and ease in maintaining intimate relationships that CMC affords. During these formative years, intimacy, sexuality, and self-identity are explored and refined with greater depth and breadth through social and interpersonal interactions. The complexity and the intricate nature with which CMC is woven into the lives of young people makes considering its impact a necessity whenever exploring any aspect of adolescent and young adult development. According to Bergdall et al. (2012), “The attributes of immediacy and mobility, the increased capacity for data storage and retrieval, and mobile Internet access provided participants with relatively easy means to facilitate their relational and sexual behavior in new ways” (p. 579).

### **Technology Use and Relationship Attitudes and Behaviors**

A predominant medium of today’s communication is technology and understanding the uses of technology by those of differing forms of attachment may explain how technology use will affect future relationships and help identify potential opportunities to improve relationships. Few studies exist that have examined the relationship between communication technology and attachment. The ties between partner availability and intimacy are made more efficacious through increased CMC (Morey et al., 2013). Components central to the development of a relationship include self-disclosure and emotional intimacy, and increased electronic communication has been found to enhance both. According to Morey, “greater cell phone use among college students with a romantic partner was associated with more love and commitment and

decreased relational uncertainty” (p. 1773).

Jin and Peña (2010) found no relationship between attachment style and texting frequency, but they did report that participants with high avoidant attachment scores initiated phone calls significantly less than participants who scored lower in avoidance, a relationship that was particularly strong for those with lower scores in anxiety. However, other research focused on sexting, the sending of sexually explicit pictures, video, or messages, did find significant links to attachment. Attachment anxiety was linked to sexting for individuals in relationships, as well as acceptance and positive attitudes regarding sexting (Weisskirch & Delevi, 2011). In a college student sample, Drouin and Lagraff (2012) further explicated the links between sexting and attachment anxiety as well as a relationship between avoidant attachment and sexting. Focusing on the differences between previous research findings is vital to fully understand these relationships.

Considering media richness theory, individuals with avoidant attachment styles tend to use more mediated channels of communication because they have lower levels of expected intimacy, especially public channels like SNS. Those with anxious attachment, who are concerned about trust and constant contact with their partner, tend to prefer richer communication channels using technology due to the real-time nature of conversations, higher levels of conversation intimacy, and instantaneous responses. This may be because immediate responses or real-time communication conveys a sense of security with one’s source of security, which is vital to the management of anxiety for those with higher levels of trait anxiety (Morey et al., 2013).



With each passing year, communication technology becomes an increasingly central feature of daily life; however, many questions remain with relation to romantic and sexual relationships. Future research about relational and sexual behavior among young people should consider how communication technology influences the decision-making processes, the communication patterns with partners, and how behavior evolves prior to and during romantic relationships. One thing is for certain - as technology evolves, it is vital to understand how CMC is used in the pursuit of romantic and sexual relationships in order to limit potential risks and to support young people in establishing healthy and safe relationships in the future (Bergdall et al., 2012).

### **Response Latency**

Unique to the newer methods of communication, specifically texting, email, and instant messaging, is the ability for real-time instant message delivery and increased intensity of interactivity. These new forms of communication, particularly texting, are especially interesting due to the novel combination of written and oral communication. The extremely interactive, and inherently private, nature of this mobile platform of communication adds a richness to communication that was previously only served by direct communication (Gonzales, 2014; Holtgraves, 2011; Klein, 2013; Tossell et al., 2012).

This ability has created a new potential source for anxiety - response latency. One problem that arises with the use of these forms of communication is the over-estimation of the message recipient's ability to respond immediately, along with the experience of negative affect if a response is not immediately forthcoming. This latency, or delay in

communication, can sometimes serve as a signal that the relationship may be in trouble, which often occurs without any direct communication about the relationship. This is not restricted to texting as it was also found that the frequency and length of cell phone calls is negatively related to relationship uncertainty (Bergdall et al., 2012; Klein, 2013; Weisskirch & Delevi, 2012).

Frequent contact with peers and partners fosters feelings of being valued, cared for, and being popular among one's peer network. Those who do not participate in frequent contact with peers report feeling ostracized and feel an increased need to conform to the new social norms for proper CMC. Individuals often use these new technologies to strengthen current social bonds, rather than create new relationships (Skierkowski & Wood, 2012). For those who are in the beginning stages of a relationship, and those in committed relationships, communication using cell phones is an integral piece in the formation of intimacy. When communication is uninterrupted, people describe a feeling of closeness and have security in their relationship. When regular communication is disrupted, people sometimes suspect infidelity, sickness, or a loss of interest in the relationship (Bergdall et al., 2012).

In a study by Weisskirch (2012), the researcher predicted that those scoring high on anxiety might strive to confirm their attachment, attempt to learn more about their partners, and display more aggressive and distressed behavior when an unresolved problem existed. The researchers further posited that anxious people would prefer socially active media to FTF communication and would overestimate the amount of communication from their romantic partners, compared to those scoring low on anxiety.

In fact, anxious attachment was related to higher rates of texting between romantic partners, but not the amount of phone calls. The researchers indicated a need to further investigate the relationship between response time, the type of response, and relationships.

In order to understand the relationships between these concepts and constructs, it is crucial to investigate how these variables interact in order to understand the role of technology in relationships. Therefore, this study initially focused on describing patterns of computer-mediated communication for this college-aged sample. Subsequently, the relationship between response latency and then-current “state” relationship satisfaction can be understood as influenced by rejection sensitivity and attachment styles.

### **Research Questions and Hypotheses**

R<sub>1</sub>: What are the CMC patterns among college student romantic partners?

R<sub>2</sub>: Is there a relationship between response latency and state relationship satisfaction?

R<sub>2a</sub>: Is rejection sensitivity a moderator for the effects of response latency on participants’ satisfaction with their interaction and their relationship at the time of the interaction?

R<sub>2b</sub>: Is insecure attachment a moderator for the effects of response latency on participants’ satisfaction with the interaction and the relationship at the time of the interaction?

## CHAPTER III

### METHOD

#### Design

This study sought to fill gaps in the literature about young adult romantic relationships by examining patterns of CMC use and the effects of response latency on satisfaction with communication between romantic partners. This was done by obtaining daily reports of the methods of communication used and reported feelings about the relationship.

This study used a quantitative methods design and collected global data about rejection sensitivity, attachment representations, relationship satisfaction, and data about the CMC type and content between each participant and his or her romantic partner. Analyses were completed using SPSS.

#### Participants

Ninety-seven undergraduate college students (27 men, 70 women,  $M_{age} = 19.94$ ,  $SD = 2.97$ , age range: 17-34 years) from Utah State University were recruited to participate in this study using convenience sampling. Table 1 presents demographic information. Most participants identified as White American and heterosexual. Almost all participants were “dating” or “dating exclusively” and enrolled as full-time college students. The length of relationships ranged from 0 to 60 months with 82% of reported relationship lengths being 2 years or shorter.

Table 1

*Frequencies: Demographics*

Variable	<i>N</i>	Variable	<i>N</i>
Age		Relationship status	
17-18	40	Dating exclusively	52
19-20	31	Dating	37
21-22	12	Engaged	8
23-24	8	Sexual orientation	
25-26	2	Heterosexual	91
27	2	Gay/lesbian	3
34	2	Bisexual	2
Racial background		Pansexual	
White	85	Religious background	
Latino(a)	4	LDS	57
Black	1	Christian	13
Pacific Islander	1	Agnostic	8
White/Latino(a)	2	Catholic	6
White/Black	1	Atheist	5
White/Asian	1	Church of God	1
White/Native American	1	Other	7
White/Other	1	College enrollment	
Relationship length		Full-time	90
0-5.9 months	33	Part-time	7
6-11.9 months	18	Level of education	
12-17.9 months	17	High school/GED	41
18-23.9 months	11	Some college	49
24-29.9 months	1	Technical school	1
30-35.9 months	8	Associate's degree	6
36-47.9 months	6		
48-60 months	3		
Income (family income if living with parents)			
Not employed	22		
Under \$20,000	51		
\$20,000-\$29,999	7		
\$30,000-\$49,999	3		
\$50,000- \$69,999	5		
\$70,000-\$89,999	3		
\$90,000-\$109,999	3		
Over \$110,000	3		

*N* = 97.

Participants were recruited through introductory psychology classes at Utah State University, which require research participation for a portion of their semester grade. For their participation in this study, they received four hours of course research credit known as SONA credits. Participants received half of one credit for the initial survey, two credits for completing at least eight mobile surveys over their respective two-week data collection period, and one and a half credits for completing the exit survey. Participation was anonymous, using the participant's SONA identification number to align the data for each participant. Due to the relationship variables of interest, this study was restricted to participants who were in romantic relationships that are not online-only relationships. Participants could be dating, dating exclusively, or engaged.

### **Measures**

Measures in this study (see Appendix B) included demographic information and relationship information, the Rejection Sensitivity Questionnaire, the Experiences in Close Relationships Scale, the Revised Dyadic Adjustment Scale (see Appendix C), and data about the frequency and the quality of communication between the participants and the partners of the participants (see Appendix C). In addition to the measures listed, data were collected using time sampling to gather information about state measures of relationship satisfaction, response latency, and general information about the types of messages, the medium used to communicate, the perception of the interaction, and the effect of the participant (see Appendix D).

### **Demographic Information**

Demographic information was collected during the initial survey. Among the data collected were age, gender, relationship status, income, education, religious affiliation, sexual orientation, the age and gender of the participant's partner, the length of the romantic relationship, and the participant's rating of the overall relationship quality.

### **Relationship Length**

To establish the length of the participant's current romantic relationship, the reported length of courtship and length of marriage (if married) were summed. Participants were asked, "How long have you been dating your partner. (If you are married, how long did you and your partner date prior to marriage)?" Another question, "If applicable, how long have you been married to your partner?" Items were ranked on a scale with 15 categories ranging from 1 (0-2 Months) to 15 (More than 25 Years).

### **Rejection Sensitivity**

Rejection sensitivity was measured with the Rejection Sensitivity Questionnaire developed by Downey and Feldman (1996). This 18-item questionnaire has been used in many studies and consistently demonstrates high internal consistency ( $\alpha = .83$ ) and high test-retest reliability with the correlation of scores at  $.83$  ( $p < .001$ ). In this study, the Cronbach's alpha for rejection sensitivity was  $\alpha = .82$ .

### **Attachment Style**

To measure the attachment style of each participant, the Experiences in Close Relationships Scale was used (Simpson & Rholes, 1998). The ECR is a widely used 36-

item measure that has demonstrated validity and reliability across many studies.

According to Parker, Johnson, & Ketring (2011), internal consistency is high on the ECR with men's responses on the anxiety subscale measuring at a Cronbach's  $\alpha = .91$  and  $\alpha = .90$  on the avoidance subscale. Women's scores for both the avoidance and the anxiety subscales were  $\alpha = .90$ . In this study, the Cronbach's alpha .91 for both the avoidance and anxiety scales.

### **Relationship Satisfaction**

The 14-item Revised Dyadic Adjustment Scale (RDAS) was used to measure the level of and dimensions of relationship satisfaction (Busby, Christensen, Crane, & Larson, 2007). The internal consistency of the RDAS is very high at a Cronbach's  $\alpha = .90$ . In this study, the Cronbach's alpha for the Revised Dyadic Adjustment Scale was  $\alpha = .81$ .

### **Communication**

The trait level of quality of the communication between the participant and the respective partner was assessed during the demographic section of the initial survey. Additionally, the participants were asked about the overall promptness with which the partner replies to computer-mediated communications from the participant. Data were also collected about participants' cell phone, texting, Internet, SMS, and CMC usage as well as rating the amount of their partner's cell phone, texting, Internet, SMS, and CMC usage. Items of interest included the amount and methods of CMC usage. Questions were developed to discover the different types of media the participants used to communicate



with their romantic partners, as well as to establish the frequency with which the participants communicated with their partners FTF. Additional questions also attempted to establish the contextual nature of each type of media. Questions included examples like, “When communicating with your partner, how often do you use texting to...” “Discuss serious issues,” “send and receive messages of a sexual nature,” “communicate with someone else while having a texting conversation with your partner,” “communicate affection,” and “apologize.”

### **Time Sampling Measures**

During the mobile data collection phase, data were collected related to the most recent interaction the participant initiated with their romantic partners. Participants recorded the time they initiated the communication, the method of communication, the nature of their message, their affect at the time of their message, how long it took to receive a reply, the nature of the reply, the method of communication for the reply, their affect when they received the reply, their perception of the interaction (positive/negative), their satisfaction with the interaction, and their sense of relationship satisfaction after the communication.

### **Procedure**

The initial survey and exit survey could be completed on any computer with Internet access. The 2-week smartphone data collection period consisted of data collection using the participant’s personal smartphone or their computer.

The initial survey began with each participant signing up for the study via SONA,

the university research participation portal. Once a cohort of participants was ready, an email link to the initial survey was sent through the SONA system with information about the details of the study, requirements for participation, and a link to the initial survey. Once logged in, the participants read the informed consent (see Appendix A) and consented to the study. After the acquisition of consent, the survey required participants to enter their SONA ID, this allowed the researchers to be able to combine all participants' initial survey data with their individual smartphone data and exit survey data, while maintaining participant anonymity. The initial survey included demographic information, assessment of the level of technology usage across different media and device types, the Rejection Sensitivity Questionnaire (RSQ), and the Experiences in Close Relationships (ECR).

At the end of the survey, participants were provided a link to a separate online survey that collected the participant's cellular number and the cellular carrier the participant uses. This allowed for the collection of the participant's contact information separate from the private, personal information contained in the survey and allowed for notifications to be sent to their phone, indicating that it was time for them to complete the smartphone survey.

Upon receipt of a text notification, the participants were instructed to look at their recent message history to determine the last conversation the participant initiated with their romantic partner. They completed the time sampling questions at each prompt. In total, 18 notifications were sent at random times (8:00 A.M. to 8:00 P.M, 7 days per week) over the course of 2 weeks for each cohort, but the participants were only required

to complete eight surveys for full credit. At the completion of the 2-week data collection period, they were notified via text that they could complete the exit survey via the Internet. The link to the final survey was sent through the SONA system upon confirmation of the participant's time sampling data.

The exit survey included the participant's SONA ID and the Revised Dyadic Adjustment Scale (RDAS). Upon completion of the exit survey, the researchers verified the completion of the smartphone surveys and issued credit for the SONA IDs of the participants. The exit survey was the final step for participants in this study.

## CHAPTER IV

### RESULTS

#### Description of Computer-Mediated Communication Patterns

Participants' descriptions of their patterns of CMC on the intake survey indicated that they text their partners to a much greater degree than they use their cell phones to make phone calls. This pattern is similar to the number of texts the participants send to other people, compared to the number of calls the participants make to others. The numbers of calls and texts the participants received are also similar to the pattern of outgoing calls (see Table 2).

#### Preliminary Descriptive Statistics

Participants rated their overall relationship satisfaction and their overall quality of communication highly. Additional preliminary descriptive statistics related to the

Table 2

#### *Frequencies: Computer-Mediated Communication Descriptive Statistics*

Variable	<i>M</i>	<i>SD</i>	Minimum	Maximum
Calls to partner per day	1.81	3.08	0	30
Calls from partner per day	1.98	3.25	0	30
Texts to partner per day	46.47	54.55	0	300
Texts from partner per day	46.53	54.26	0	300
Calls to other people per day	3.10	3.52	0	20
Calls from other people per day	2.78	2.85	0	20
Texts to other people per day	29.93	53.29	0	400
Texts from other people per day	32.97	57.20	1	400

*N* = 97.

participant's level of satisfaction with the speed of response, rejection sensitivity, attachment styles, relationship quality, and response latency are shown in Table 3.

### Summary of Time-Sampling Data

Participants submitted a range of 5-26 ( $M = 16.57$ ,  $SD = 2.62$ ) mobile responses, for a total of 1,616 mobile responses. Nine participants completed unprompted time-

Table 3

#### *Descriptive Statistics of Global Communication and Relationship Quality*

Variable	<i>M</i>	<i>SD</i>
Relationship satisfaction (possible range 1-7)		
Men	6.37	.792
Women	6.20	.987
Quality of communication (possible range 1-7)		
Men	6.11	.974
Women	5.66	1.115
Participant speed of response (possible range 1-7)		
Men	5.59	1.185
Women	5.49	1.139
Rating of partner response speed (possible range 1-7)		
Men	5.59	1.083
Women	4.73	1.464
Satisfaction with partner response speed (possible range 1-7)		
Men	6.07	.917
Women	5.14	1.627
Level of rejection sensitivity (possible range 1-36)		
Men	8.288	2.454
Women	8.632	2.913
Level of avoidant attachment (possible range 1-7)		
Men	8.288	2.454
Women	8.632	2.913
Level of anxious attachment (possible range 1-7)		
Men	3.866	.889
Women	3.945	1.124
Dyadic adjustment score (possible range 0-69)		
Men	46.805	3.354
Women	47.039	3.340

*Note.* Men = 27, Women = 70.

sampling procedures in addition to the requested responses, five of whom completed one unprompted survey, two participants completed two unprompted surveys, one completed three unprompted surveys, and one participant completed six unprompted surveys. The most common form of CMC was texting, with a range of other forms of communication represented less frequently. A number of mobile responses included forms of communication that were not computer-mediated, such as telephone calls or face-to-face meetings, and were therefore not included in the analysis of CMC. Exchanging information was the most common form of communication, followed by flirting, making plans, and humor. Responses to the participant's messages tended to use the same mobile technology as the original message (see Tables 4 and 5). Reported latency was higher for men ( $M = 4.24$ ,  $SD = 3.572$ ) than for women ( $M = 3.72$ ,  $SD = 3.427$ ).

Table 4

*Frequencies: Mobile Computer-Mediated Communication*

Variable	<i>n</i>	%	Variable	<i>n</i>	%
Form of communication			Intent		
Texting	1,308	82	Give info	409	26
Snapchat	151	9	Flirt	295	18
Facebook message	30	2	Request info/question	252	16
Email	10	1	Make plans	142	9
Viber	15	1	Joke/humor	119	7
Instagram	4	0	Compliment	85	5
Twitter	1	0	Complaint/criticism	54	3
Heytell	1	0	Request something	51	3
Non-CMC	82	5	Apologize	30	2
			Sexual	14	1
			Other	152	10

$N = 1,616$ .

Table 5

*Frequencies: Partner Response Mobile Computer-Mediated Communication*

Variable	<i>n</i>	%	Variable	<i>n</i>	%
Form of communication			Intent		
Texting	1,226	80	Give info	464	30
Snapchat	133	9	Flirt	287	19
Facebook message	33	2	Request info/question	157	10
Email	15	1	Make plans	116	8
Viber	6	0	Joke/humor	111	7
Instagram	4	0	Compliment	91	6
Twitter	1	0	Complaint/criticism	43	3
Heytell	1	0	Apologize	29	2
Non-CMC	128	8	Sexual	21	1
			Request something	11	1
			Other	201	13

*N* = 1,616.

## **Relationships Between Personality Constructs and Computer-Mediated Communication**

### **Bivariate Correlations**

Bivariate correlations were first calculated to explore the associations among rejection sensitivity, attachment dimensions, response latency, and other CMC variables. First, we observed very strong correlations among the three variables used to rate the interactions (i.e., mood after the interaction, relationship satisfaction after the interaction, and satisfaction with the interaction). Correlations among the three interaction variables were between .665 and .811. Therefore, since the variables appeared to be measuring a similar construct related to the quality of the interaction, an average was calculated for each participant to create a general interaction rating ( $\alpha = .848$ ). The interaction variable

was highly negatively skewed with a skewness statistic of -1.484 ( $SE = .062$ ); therefore, data were reflected prior to a log transformation, and then re-reflected to return to the original distribution shape. Table 6 presents bivariate correlations between the interaction rating and the other variables in the moderator model separately for men and women.

Response latency was significantly related to the overall evaluation of the interaction for women, such that women who waited longer for a response from their partners rated the interaction more negatively. However, more consistent patterns of association were observed between the personality constructs and interaction ratings. For both men and women, significant negative correlations emerged between the interaction ratings and rejection sensitivity and both attachment dimensions.

### Testing Moderating Effects of Personality Constructs

To investigate the moderation effects for research questions R<sub>2a</sub>, interaction effects were assessed across a number of multiple regression analyses. First, the independent variable and moderators (i.e., response latency, rejection sensitivity, attachment avoidance, and attachment anxiety) were centered around each of the respective means to control for multicollinearity among the variables and the interaction

Table 6

#### *Correlations*

Variable	Rej. sensitivity	Av. attach.	Anx. attach.	Latency
Interaction rating				
Men	-.253**	-.164	-.227**	-.079
Women	-.063*	-.333**	-.17**	-.146**

\* $p < .05$  (2-tailed).

\*\* $p < .01$  (2-tailed).



terms (Aiken, West, & Reno, 1991). Then, a series of multiple regression analyses was calculated separately for men and women, using the transformed mean interaction rating as the dependent variable. In the first step for all analyses, scores on the RDAS were entered to control for participants' global sense of relationship satisfaction. In the second step, response latency and one of the three personality constructs (rejection sensitivity, avoidance, or anxiety) were entered in to the model. In the third step, the interaction between response latency and the relevant personality construct was added to the model. Tables 7 and 8 report the results of all analyses, indicating  $R^2$  change and F change with the addition of the interaction terms.

For women, the RDAS and response latency were linked to interaction ratings in all three regression analysis in predicted directions. Both avoidant and anxious attachment styles demonstrated significant negative relationships with interaction ratings, but rejection sensitivity was unrelated to interaction ratings and no interaction effects were significant (see Table 7).

For men, the RDAS was a significant predictor of interaction ratings in all three models, but response latency demonstrated no significant direct effects. Rejection sensitivity and both forms of insecure attachment were negatively related to interaction ratings. The interaction between avoidant attachment and response latency was statistically significant, and the interaction between anxious attachment and response latency approached significance ( $p = .055$ ; see Table 8).

To interpret the interaction between latency and avoidance, a median split was performed on avoidance. Those who scored above the median were classified as having

Table 7

*Regressions Assessing Moderation for Women*

Outcome	Predictors	Adj. $r^2$	$F$ change	$p$	Beta	$t$	$p$
Rejection sensitivity							
Step 1	RDAS	.022	23.088	< .001	.152	4.805	< .001
Step 2	RDAS	.041	10.341	< .001	.143	4.469	< .001
	Latency				-.139	-4.418	< .001
	Rej. sens.				-.024	-.753	.452
Step 3	RDAS	.041	1.059	.304	.145	4.511	< .001
	Latency				-.146	-4.535	< .001
	Rej. sens.				-.027	-.827	.409
	Interaction				.033	1.029	.304
Avoidant attachment							
Step 1	RDAS	.022	23.088	< .001	.152	4.805	< .001
Step 2	RDAS	.128	59.996	< .001	.080	2.594	.010
	Latency				-.116	-3.865	< .001
	Av. att.				-.305	-9.892	< .001
Step 3	RDAS	.128	.811	.368	.081	2.631	.009
	Latency				-.119	-3.933	< .001
	Av. att.				-.309	-9.926	< .001
	Interaction				.027	.901	.368
Anxious attachment							
Step 1	RDAS	.022	23.088	< .001	.152	4.805	< .001
Step 2	RDAS	.069	25.187	< .001	.151	4.862	< .001
	Latency				-.127	-4.077	< .001
	Anx. att.				-.169	05.446	< .001
Step 3	RDAS	.068	.018	.893	.151	4.862	< .001
	Latency				-.127	-4.050	< .001
	Anx. att.				-.169	-5.445	< .001
	Interaction				.004	.135	.893

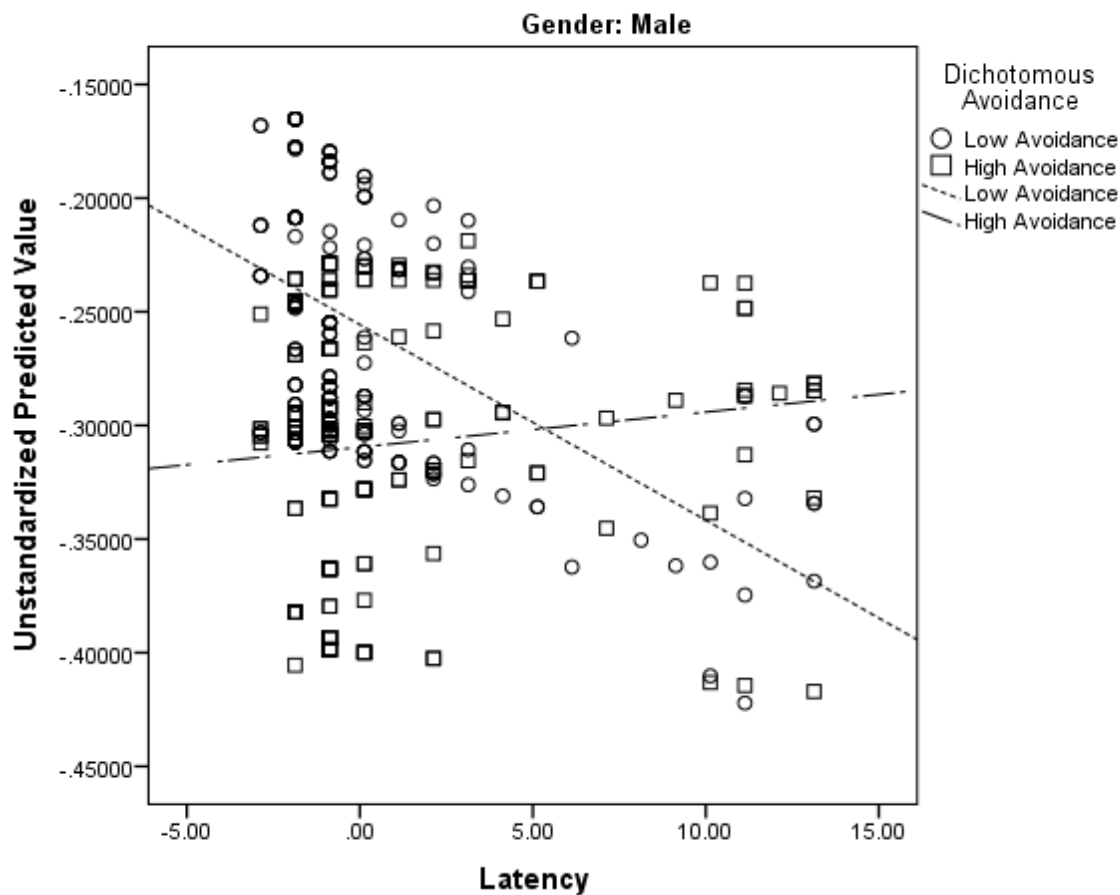
Table 8

*Regressions Assessing Moderation for Men*

Outcome	Predictors	Adj. $r^2$	$F$ change	$p$	Beta	$t$	$p$
Rejection sensitivity							
Step 1	RDAS	.073	35.018	< .001	.275	5.918	< .001
Step 2	RDAS	.105	8.496	< .001	.219	4.585	< .001
	Latency				0,952	01,144	,253
	Rej. sens.				-.184	-3.856	< .001
Step 3	RDAS	.103	.248	.619	.221	4.608	< .001
	Latency				-.048	-1.028	.305
	Rej. sens.				-.186	-3.872	< .001
	Interaction				.023	.498	.619
Avoidant attachment							
Step 1	RDAS	.073	35.018	< .001	.275	5.918	< .001
Step 2	RDAS	.095	6.144	.002	.264	5.740	< .001
	Latency				0.060	-1.298	.195
	Av. att.				-.147	-3.192	.002
Step 3	RDAS	.105	5.774	.017	.265	5.798	< .001
	Latency				-.075	-1.633	.103
	Av. att.				-.156	-3.390	.001
	Interaction				.111	2.403	.017
Anxious attachment							
Step 1	RDAS	.073	35.018	< .001	.275	5.918	< .001
Step 2	RDAS	.123	13.161	< .001	.262	5.780	< .001
	Latency				-.085	-1.865	.063
	Anx. att.				-.223	-4.915	< .001
Step 3	RDAS	.129	3.689	.055	.258	5.711	< .001
	Latency				-.120	-2.456	.014
	Anx. att.				-.216	-4.750	< .001
	Interaction				-.094	-1.921	.055

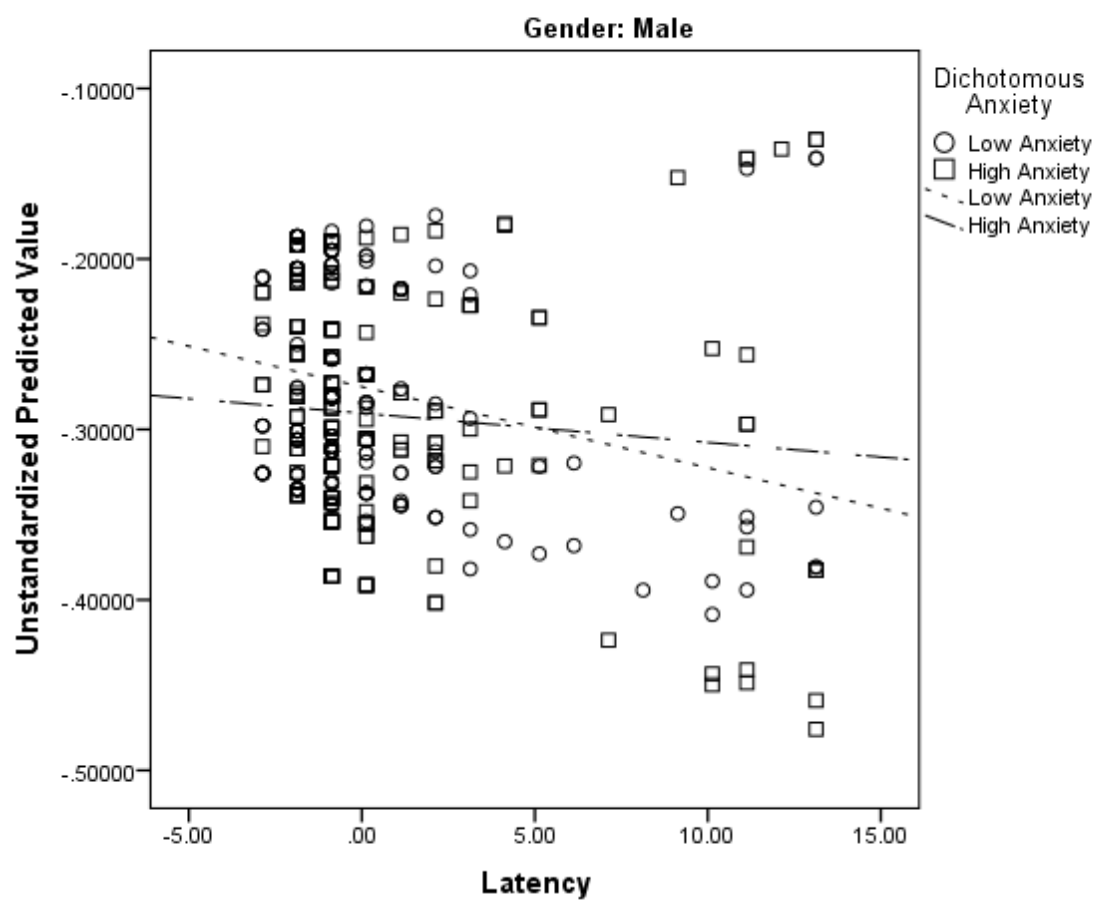
high avoidance and those who scored below the median were classified as having low avoidance. A scatterplot was then created using the unstandardized predicted values for the interaction rating. Figure 1 illustrates a negative relationship between latency and the interaction rating for those who scored low in avoidance. In contrast, there was essentially no relationship between interaction ratings and latency for those high in avoidance.

To interpret the nearly significant ( $p = .055$ ) interaction between latency and anxious attachment, a median split was performed on anxious attachment. Those who



*Figure 1.* Latency and avoidant attachment.

scored above the median were classified as having high anxious attachment and those who scored below the median were classified as having low anxious attachment. A scatterplot was then created using the unstandardized predicted values for the interaction rating. Figure 2 illustrates a stronger negative relationship between latency and the interaction rating for those who scored low in anxious attachment.



*Figure 2.* Latency and anxious attachment.

## CHAPTER V

### DISCUSSION

This study sought to identify and describe the patterns and processes of computer-mediated communication as technology is increasingly an integral part of 21<sup>st</sup> century life. Prior to this study, there existed relatively sparse data about the landscape and patterns of CMC usage within the college-aged community. This study also sought to elucidate and clarify the role of CMC in romantic relationships, which are said to be one of the most important developmental milestones upon entry into adulthood (Eryilmaz & Atak, 2011; Rauer et al., 2013). In addition to CMC, other variables of interest in this study include attachment style, rejection sensitivity, and a variable that remains unstudied to this researcher's knowledge, response latency, or the amount of time one has to wait for a reply after messaging one's romantic partner.

Results indicated that people tend to engage in CMC via texting most frequently and they text both their romantic partners and others often, though texts to others total less than half of the number of texts to romantic partners. The content of messages was most often related to information exchange, followed by relationship-building interactions including flirting, joking, compliments, and making plans. Over 80% of the content of the messages studied were of a positive nature and responses were generally quickly forthcoming. This study extends the literature about the landscape of CMC.

#### **Technology and Relationship Quality**

Due to the nature of today's widespread Internet usage, it is important that CMC is

considered as a critical interpersonal and intrapersonal variable. Prior to this study, few researchers have investigated the wide variety of CMC channels available in the digital age or the reasons or situations users select certain channels of communication over others (Coyne et al., 2011; Davis, 2012; Duggan & Smith, 2014). Among the primary differences between CMC and real-time communication like FTF or telephone communication is the ability to consider self-presentation prior to sending each message. This consideration period can lead to a closer, more intimate relationship, but it can also lead to idealization of a polished image of one's romantic partner (Skierkowski & Wood, 2012). Higher Internet usage has also been positively correlated with social involvement, self-esteem, and psychological well-being (Gonzales, 2014; Whitty, 2008; Whitty & McLaughlin, 2007). Psychosocial development of late adolescence and early adulthood becomes a topic of interest as opportunities for social engagement and the ease at which intimate relationships can be maintained using CMC. During these formative years, social media and technology make exploring intimacy, sexuality, and self-identity possible at greater depth and breadth (Bergdall et al., 2012).

Links between partner availability and intimacy are made more efficacious via CMC through the increased ability to self-disclose and intimacy. When considering attachment and technology usage, previous research has found no relationship between attachment style and texting frequency (Jin & Peña, 2010), but other research focused on sexting did find significant links to attachment anxiety (Weisskirch & Delevi, 2011) and avoidant attachment (Drouin & Lagraff, 2012). Previous research also reveals positive correlations between avoidant attachment and the use of more mediated channels of

communication due the lower levels of expected intimacy; individuals with anxious attachment tend to prefer richer forms of communication with higher levels of intimacy and rapid or instantaneous responses due to the possible sense of security provided by perceived availability (Morey et al., 2013).

Romantic relationship quality was rated highly in this study on the global level and across the individual time-sampling measures. The quality of communication and satisfaction with individual interactions were also rated consistently high. These high ratings may reflect the developmental trajectory of romantic relationships, meaning that with the high freedom to dissolve relationships that are not working (with minimal personal cost) and the ability to present one's best self initially, comes a higher level of satisfaction. These high ratings could also evidence the cultural context within which these data were collected. With the high proportion of participants belonging to the LDS religion in the sample, it is possible that participants experienced the emphasis for LDS youth to place high priority on positive relationship functioning and the establishment of long-term romantic bonds in early adulthood (The Church of Jesus Christ of Latter-day Saints [LDS], 2001). This priority in relationships may prime young adults to be more invested in romantic partners and view them more positively. Additionally, although sexting is somewhat prevalent in the literature, results of this study indicate that sexting occurs at a low rate (1%). Low rates of sexting in this sample are possibly explained by the high percentage of membership in the conservative LDS religion, which discourages the discussion of sexual topics between romantic partners prior to marriage. Another explanation might include that sexting is a hot topic and therefore attracts attention



disproportionate to actual occurrence.

### **Response Latency**

Instant message delivery, inherent privacy, and intensity of interactivity via technological means has revolutionized relational communication in a way only previously possible through direct communication (Gonzales, 2014; Klein, 2013; Holtgraves, 2011; Tossell et al., 2012). One potential downfall for these new abilities is the potential overestimation of the availability of one's romantic partner, which carries the potential for negative affect if the reply does not arrive quickly. This latency, which may be innocuous, has the potential to serve as a signal of relationship trouble and is not restricted to texting as the length of phone calls has also been found to be negatively related to relationship uncertainty, especially for those who are exploring relationship intimacy (Bergdall et al., 2012; Klein, 2013; Weisskirch & Delevi, 2012). Weisskirch (2012) found that higher levels of anxious attachment were positively correlated with higher rates of texting, but not phone calls.

Responses from romantic partners in this study tended to come quickly with 31% being immediate responses and 65% of responses coming within 5 minutes. Investigation of research question R<sub>2</sub> provided unexpected results in that response latency was directly related to interaction ratings for women only. Women reported that they waited longer for responses from their partners as well. Perhaps response latency becomes more of an interaction issue for women if they tend to experience greater variability in response time or longer wait for responses. Gendered interaction patterns in FTF communication have

long been linked to relationship outcomes (e.g., Driver, Tabares, Shapiro, & Gottman, 2012). Given the evidence in this sample for the ubiquity of CMC in young couples, new research related to the role of gender in engaging with and interpreting CMC is critical.

The effects of response latency may depend on the content and the broader relationship context of the messages. For example, the delayed response of a complaint may be interpreted in a different manner than would a delayed response to a message that provided one's partner unimportant information. From a broad relationship context, messages sent and received in times of conflict or in fragile relationships may be subject to other relationship cues that may influence the interpretation of latency in meaningful ways.

### **Attachment Representations in the Context of Computer-Mediated Communication**

Beginning in infancy, interactions with early caregivers, most notably interactions centered around the child's distress, lead to the development of an attachment style, which serves as the template by which the individual approaches future relationships. In adulthood, attachment style shapes relatively stable behavioral patterns in relationships. In this study, both anxious and avoidant attachment were significantly negatively related to the interaction rating for both men and women. Additionally, participants with higher ratings of insecure attachment tended to rate interactions more negatively on a global level, which is consistent with existing literature as these core components of identity might influence the lens through which an individual views their world and their

relationships. Other considerations include whether their interactions were actually objectively more negative than were the interactions of their peers, or whether individuals with insecure attachment interpret more neutral signals as negative (Bernstein & Benfield, 2013; Downey & Feldman, 1996; Downey et al., 1998; London et al., 2012; Romero-Canyas & Downey, 2013; Romero-Canyas et al., 2010).

Insecure attachment moderated the effects of response latency on the interaction rating for men. For men low in avoidant attachment, increasing latency was related to lower interaction ratings. For men who scored high in avoidant attachment, longer latency was related to slightly higher ratings of the interaction, which fits with existing research that individuals with high avoidant attachment exhibit discomfort and may therefore prefer lower relationship intimacy and closeness (Collins & Feeney, 2000; Hazan & Shaver, 1987). For men who scored low in anxious attachment, latency was negatively related to interaction ratings. Men with higher scores in anxious attachment demonstrated a much weaker relationship between latency and interaction ratings. These results may indicate that high scores on anxious attachment may operate at a global or core level, such that more anxious men may be rating their interactions based more on their core attachment representations than the actual features of the interactions themselves. This speculation is guarded however, since the interaction effect showed only a trend at  $p = .055$ .

### **Rejection Sensitivity**

Those high in rejection sensitivity tend to expect rejection from significant others

and those who are able to hinder their achievement of important goals (Downey et al., 1998). Early interactions with parents, peers, and romantic interests can be relevant for developing sensitivity to rejection, depression, and emotional maladjustment in later adult romantic relationships, as those to whom the individual has the closest relationships are also those who have the potential to inflict the greatest harm (Bernstein & Benfield, 2013; Downey & Feldman, 1996; Madsen & Collins, 2011; Zimmer-Gembeck et al., 2013). In addition to emotional struggles, those with high RS tend to elicit the rejection they fear through excessive neediness, heightened vigilance, jealousy, and other aggressive behaviors, as they tend to see rejection everywhere. In previous research, this was especially true for women who, more than men, were likely to feel unloved after conflict, associated conflict with pessimism about the stability of the relationship, and engaged in more negative behavior during and after the conflict (Bernstein & Benfield, 2013; Downey et al., 1998; Downey & Feldman, 1996; London et al., 2012; Romero-Canyas & Downey, 2013; Romero-Canyas et al., 2010). In contrast, for this sample rejection sensitivity was unrelated to interaction ratings for women, but was negatively related to interaction ratings for men. Rejection sensitivity might lead to more negative interpretations of daily CMC interactions. Alternatively, rejection sensitivity might lead to objectively more negative interactions, with highly rejection sensitive partners behaving in ways that lead to a self-fulfilling prophecy. Our correlational data leave multiple interpretations open. Regardless, the apparently unique gender patterns, relative to previous research, further support the notion that the role of gender in contemporary relationship communication is still poorly understood.

### **Limitations and Future Directions**

This study, while informative regarding the relationship between attachment, rejection sensitivity, and response latency in computer-mediated communication, should be interpreted with consideration of a number of limitations. The correlational nature of this study makes consideration of the possible bidirectional relationships over time a priority for future research. Analyses for this project also failed to address the lack of independence among the multiple time-sampling responses provided by each participant. Additionally, although participants were prompted several times per day to reflect on their most recent CMC with their romantic partners, some responses described interactions that had just transpired (and therefore might not have even received a response), while others may have transpired hours before (introducing potential error in recall).

The sample in this study was predominantly White, LDS, heterosexual, and relatively young. Additionally, the participants in this sample were all recruited from introductory psychology courses, which may, in themselves, be subject to selection biases. Introductory classes at Utah State University tend to have more women enrolled than men and students may have a higher interest in psychology than do students who attend classes related to different fields within the social science general education required courses. Directions for future study then include looking at samples in different developmental stages, especially considering any potential interactions between developmental stages and religious affiliation. It is possible that relationships between young adults within an LDS context may look different than relationships in other

religious contexts. As stated, LDS individuals are more likely to seek long-term relationships at this developmental stage. LDS individuals also receive religiously based instruction about gender roles and relationship roles that may change the way LDS young adults approach relationships. Culture is another consideration as the sample was predominantly White. Different cultural contexts may reveal differential interpretation of response latency. Educational level is another consideration as educational diversity was limited in this sample.

In this study, the sample included four gay/lesbian relationships and their data were included in the analyses. It is important to note that we do not know the extent to which sexual orientation may be related to these research questions. Lesbian relationships are of particular interest as the results indicate that response latency was significantly related to the interaction ratings for women only. Finally, additional methods and analyses may also exist that better capture and measure relationship and personal variables, perhaps including the measurement of physiological responses, and any related relationships between them.

### **Implications and Conclusions**

Results of this study suggest applied implications for clinical work as technology has become a vehicle for the delivery of information and communication important to the individual and to the couple. From interpersonal communication or hurt feelings, to the potential discovery of infidelity or invalidation from one's romantic partner, understanding how communication influences relationships or introduces conflict in the

romantic relationship may guide therapeutic intervention. These data also support existing literature in considering technology in a developmental context. It is possible that the role of technology may be greater in younger couples who use it in greater numbers, or that increased technological demands and abilities may shape expectations of partners and change the landscape of what is expected and normative in future relationships. With regard to response latency, it is important to further investigate this variable and its disproportional effect for women from a developmental standpoint, as this may develop an additional point of friction between men and women. These data, with the new variable of response latency are important additions to the literature in that response latency may trigger relational representations (attachment and rejection sensitivity) that have previously been linked to observed behaviors and global self-reports about relationships. These CMC interpretations are novel and therefore become potential points of intervention from both a developmental and clinical focus to mitigate reactivity and lower negative results.

In summary, this study sought to investigate the landscape and types of computer-mediated communication. Results of this study indicate that response latency is a new variable that is important to consider with regard to personal and relationship development, as response latency differentially links to men and women's ratings of relationship satisfaction and the satisfaction with interactions with one's romantic partner. These data increase the body of literature about technological communication, which is limited considering the pace and quantity of changes that occur seemingly daily.

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APPENDICES

Appendix A  
Letter of Information

## Letter of Information

Introduction/ Purpose: Ron C. Bean and Dr. Renee Galliher in the Department of Psychology at Utah State University are conducting a research study to understand the relationship between romantic relationship quality and technological communication. You are being asked to participate in this study because you are enrolled in courses at Utah State University. Approximately, 100 students will participate in the study.

Procedures: If you agree to participate in this study, you will be asked to complete on-line questionnaires about your relationship quality and length, the amount of computer-mediated communication usage, and other personal and demographic information. The initial survey will take about 30 minutes. After the initial survey, you will then be prompted via text message to complete a short survey about recent mobile communication twice per day between the hours of 9:00 am and 9:00 pm for nine days. Completion of ten of the mobile surveys is required for full SONA credit. Each mobile survey will take approximately 5 minutes to complete. After completing the initial survey and at least 10 mobile surveys, you will complete an exit survey that will take approximately 10 minutes. The total time required to participate in this study should be approximately an hour and a half.

Risks: There are minimal anticipated risks to this study. The personal nature of some questions may cause discomfort. However, if you feel uncomfortable answering a question, you may skip the question(s) and proceed with the questionnaire. In addition, you may be prompted to complete the mobile surveys at inconvenient times. You may choose not to respond to mobile survey prompts that you do not wish to complete.

Benefits: There may not be any direct benefits to you from participating in this study; however, we hope you will benefit from the opportunity to reflect on your experiences in your own relationship. The researchers will learn about the roles of computer-mediated communication in the development and maintenance of romantic relationships, which could potentially be useful to psychologists, researchers, educators, and other service providers working with young adults in college settings.

Explanation & offer to answer questions: If you have any questions, concerns, complaints, or research-related problems, please contact Ron C. Bean by e-mail at ronbean@gmail.com or Dr. Renee Galliher at (435) 797-3391 or by e-mail at renee.galliher@usu.edu.

Payment/Compensation: You will earn course credit in your psychology course by participating in this study. Throughout the process of this study, you will be asked to enter your SONA identification number in order to earn credit on the SONA course management system. Participants will be awarded four SONA credits for full participation in this study.

Voluntary nature of participation and right to withdraw without consequence:

Participation in research is entirely voluntary. You may refuse to participate or withdraw at any time without consequence.

Confidentiality: All survey responses are anonymous, and it will not be possible to identify your responses, as the survey software uses a Secure Survey Environment. Research records will be kept confidential, consistent with federal and state regulations. Only the investigators will have access to the data, which will be downloaded and stored on a password-protected computer.

IRB Approval Statement: The Institutional Review Board (IRB) for the protection of human participants at USU has reviewed and approved this research study. If you have any pertinent questions or concerns about your rights or think the research may have harmed you, you may contact the IRB Administrator at (435) 797-0567 or email [irb@usu.edu](mailto:irb@usu.edu). If you have a concern or complaint about the research and you would like to contact someone other than the research team, you may contact the IRB Administrator to obtain information or to offer input.

Copy of Consent: Please print a copy of this informed consent for your files.

PI & Student Researcher (Co-PI):

Renee V. Galliher, Ph.D., Principal Investigator  
Ron C. Bean, Student Researcher

Participant Consent: If you have read and understand the above statements, please click on the “CONTINUE” button below. This indicates your consent to participate in this study.

Thank you very much for your participation! Your assistance is truly appreciated.



Appendix B  
Thesis Entrance Survey

## Thesis Entrance Survey

### Demographics

What is your relationship status?

1 – Single 2 – Dating 3 – Dating Exclusively 4 – Engaged 5 - Married

What is your SONA ID?

What is your gender?

Male Female Other \_\_\_\_\_

What is your sexual orientation?

Heterosexual Gay/Lesbian Bisexual Other \_\_\_\_\_

Is your partner male or female?

Male Female Other \_\_\_\_\_

How long have you been engaged?

1 = Less than 3 months 2 = 3 - 6 Months 3 = 6 - 9 Months 4 = 9 Months – 1 Year 5 = 1 -

1½ Years 6 = 1½ Years to 2 years 7 = 2 – 3 Years 8 = 3 – 4 Years

9 = More than 4 Years

How long have you been married?

1 = Less than 6 Months 2 = 1 Year 3 = 2 Years 4 = 3 Years 5 = 4 Years

6 = 5 Years 7 = 6 Years 8 = 7 Years 9 = 8 Years 10 = 9 Years 11 = 10 Years

12 = 11 – 15 Years 13 = 16 – 20 Years 14 = 21-25 Years 15 = Over 25 Years

The following four questions share these response options:

1 = Less than 3 months 2 = 3-6 Months 3 = 6-9 Months 4 = 9 Months – 1 Year 5 = 1 - 1

$\frac{1}{2}$  Years 6 = 1 $\frac{1}{2}$  Years to 2 years 7 = 2 – 3 Years 8 = 3 – 4 Years

9 = More than 4 Years

How long have you been dating exclusively?

How long have you been dating?

How long did you date your partner before getting engaged?

How long did you date (including the time engaged) your partner before getting married?

How would you rate the overall relationship quality between you and your partner?

Very Dissatisfied

Neutral/mixed

Very Satisfied

1

2

3

4

5

6

7

How would you rate the overall communication between you and your partner?

Very Dissatisfied

Neutral/mixed

Very Satisfied

1

2

3

4

5

6

7

How quickly do you generally respond to nonverbal communication (texting, email,

Facebook messages) with your partner?

Very Slow

Neutral/mixed

Very Fast

1

2

3

4

5

6

7

How quickly does your partner generally respond to nonverbal communication (texting, email, Facebook messages)?

Very Slow			Neutral/mixed			Very Fast
1	2	3	4	5	6	7

How satisfied are you with your partner's average response time?

Very Dissatisfied			Neutral/mixed			Very Satisfied
1	2	3	4	5	6	7

What is your age?

What is the age of your relationship partner?

Which category or categories best describe your racial background? (Check all that apply)

1 = White/European American 2 = Black/ African American 3 = Hispanic/Latino(a)

4 = Asian/Asian American 5 = Native American 6 = Pacific Islander 7 = Other

Religious Affiliation

1 = Atheist 2 = Agnostic 3 = Catholic 4 = LDS 5 = Baptist 6 = Methodist

7 = Protestant 8 = Islam 9 = Buddhism 10 = Hinduism 11 = Judaism

12 = Christian 13 = Church of God in Christ 14 = Bahá'í Faith 15 = Other

Are you currently enrolled in college?

1 = Yes – Full Time 2 = Yes – Part Time 3 = No

What is the highest level of education you have completed?

1 = Less than High School 2 = High School/GED 3 = Technical School

4 = Some College 5 = 2-Year College Degree 6 = 4-Year College Degree

7 = Master's Degree 8 = Doctoral Degree 9 = Professional Degree (i.e., JD, MD)

The following two questions share these response options:

1 = Not Currently Employed 2 = Under \$20,000 3 = \$20,000 - \$29,000

4 = \$30,000 - \$39,000 5 = \$40,000 - \$49,000 6 = \$50,000 - \$59,000

7 = \$60,000 - \$69,000 8 = \$70,000 - \$79,000 9 = \$80,000 - \$89,000

10 = \$90,000 - \$99,000 11 = \$100,000 - \$109,000 12 = \$110,000 - \$119,000

13 = \$120,000 - \$129,000 14 = \$130,000 - \$139,000 15 = \$140,000 - \$149,000

16 = \$150,000+

What is your annual income? (If living with parents, list approximate family income)

What is your spouse's annual income?



upset him/her.

9. You ask someone in one of your classes to coffee.
10. After graduation you can't find a job and you ask your parents if you can live at home for a while.
11. You ask a friend to go on vacation with you over Spring Break.
12. You call your boyfriend/girlfriend after a bitter argument and tell him/her you want to see him/her.
13. You ask a friend if you can borrow something of his/hers.
14. You ask your parents to come to an occasion important to you.
15. You ask a friend to do you a big favor.
16. You ask your boyfriend/girlfriend if he/she really loves you.
17. You go to a party and notice someone on the other side of the room, and then you ask them to dance.
18. You ask your boyfriend/girlfriend to come home to meet your parents.

### Experiences in Close Relationships Scale

Instructions: The following statements are about how you feel in romantic relationships. For this measure we are interested in how you experience relationships in general, and not just in your current relationship. Respond to each statement by indicating how much you agree or disagree with it.

For example, a rating of 1 indicates that you disagree strongly, a rating of 4 indicates a neutral or mixed rating, and a rating of 7 indicates agree strongly.

Disagree strongly

Neutral/mixed

Agree strongly

1

2

3

4

5

6

7

1. I prefer not to show a partner how I feel deep down.
2. I worry about being abandoned.
3. I am very comfortable being close to romantic partners.
4. I worry a lot about my relationships.
5. Just when my partner starts to get close to me I find myself pulling away.
6. I worry that romantic partners won't care about me as much as I care about them.
7. I get uncomfortable when a romantic partner wants to be very close.
8. I worry a fair amount about losing my partner.
9. I don't feel comfortable opening up to romantic partners.
10. I often wish that my partner's feelings for me were as strong as my feelings for  
him/her



11. I want to get close to my partner, but I keep pulling back.
12. I often want to merge completely with romantic partners, and this sometimes scares them away.
13. I am nervous when partners get too close to me.
14. I worry about being alone.
15. I feel comfortable sharing my private thoughts and feelings with my partner.
16. My desire to be very close sometimes scares people away.
17. I try to avoid getting too close to my partner.
18. I need a lot of reassurance that I am loved by my partner.
19. I find it relatively easy to get close to my partner.
20. Sometimes I feel that I force my partners to show more feeling, more commitment.
21. I find it difficult to allow myself to depend on romantic partners.
22. I do not often worry about being abandoned.
23. I prefer not to be too close to romantic partners.
24. If I can't get my partner to show interest in me, I get upset or angry.
25. I tell my partner just about everything.
26. I find that my partner(s) don't want to get as close as I would like.
27. I usually discuss my problems and concerns with my partner.
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.
29. I feel comfortable depending on romantic partners.
30. I get frustrated when my partner is not around as much as I would like.
31. I don't mind asking romantic partners for comfort, advice, or help.

- 32. I get frustrated if romantic partners are not available when I need them.
- 33. It helps to turn to my romantic partner in times of need.
- 34. When romantic partners disapprove of me, I feel really bad about myself.
- 35. I turn to my partner for many things, including comfort and reassurance.
- 36. I resent it when my partner spends time away from me.

Appendix C  
Thesis Exit Survey

### Thesis Exit Survey

What is your SONA ID?

Did you complete the CMC Entrance Survey?

1 = Yes      2 = No

Did you complete at least eight mobile surveys?

1 = Yes      2 = No

Have you successfully uploaded your mobile app survey data as instructed?

1 = Yes      2 = No

### Revised Dyadic Adjustment Scale

Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

Always Agree	Occasionally Agree	Frequently Disagree	Always Disagree
1	2	3	4
			5
			6

Religious Matters

Demonstrations of Affection

Making Major Decisions

Sex Relations

Conventionality (correct of proper behavior)

Career Decisions

Please indicate below the frequency between you and your partner for each item on the following list.

All of the time		More Often than not	Occasionally		Never
1	2	3	4	5	6

How often do you discuss or have you considered divorce, separation, or terminating your relationship?

How often do you and your partner quarrel?

Do you ever regret that you married (or lived together)?

How often do you and your mate “get on each other’s nerves”?

Do you and your mate engage in outside interests together?

1 = Every Day 2 = Almost Every Day 3 = Occasionally 4 = Rarely 5 = Never

How often would you say the following events occur between you and your mate?

Never	< Once/Month	1-2 Times/Month	1-2 Times/Week	Once/Day	More Often
1	2	3	4	5	6

Have a stimulating exchange of ideas

Work together on a project

Calmly discuss something

**Communication Landscape Questions**

Approximately how many calls do you make to your partner each day?

Approximately how many calls does your partner make to you each day?

Approximately how many texts do you send to your partner each day?

Approximately how many texts does your partner send to you each day?

Approximately how many calls do you make to other people each day?

Approximately how many calls do other people make to you each day?

Approximately how many texts do you send to other people each day?

Approximately how many texts do other people send to you each day?

Appendix D

Time Sampling Mobile Survey

### Time Sampling Mobile Survey

Please locate the last electronic conversation with your partner that you initiated. Please note the time you sent the message and the time you received a reply as well as the content and tone of the message.

What time did you initiate the last conversation with your partner?

When you initiated the most recent conversation, please rate your mood.

Very Happy   Somewhat Happy   Neutral/mixed   Somewhat Unhappy   Very Unhappy

1                    2                    3                    4                    5                    6                    7

What form of communication did you use for your last conversation?

1 = Texting    2 = Facebook Message    3 = Twitter    4 = Email    5 = Snapchat

6 = GChat    7 = Yahoo Messenger    8 = Tumblr    9 = Instagram    10 = Kik

11 = Google Plus    12 = WhatsApp    13 = Viber    14 = Voxer    15 = HeyTell

16 = Other \_\_\_\_\_

What was the intent (content) of your message?

1 = Request Information/ Question    2 = Give Information    3 = Flirt

4 = Complaint/Criticism    5 = Request Something    6 = Compliment    7 = Sexual

8 = Apologize    9 = Make Plans    10 = Joke/ Humor    11 = Other \_\_\_\_\_

Please rate your relationship satisfaction at the time you initiated the conversation.

Very Dissatisfied

Neutral/mixed

Very Satisfied

1                    2                    3                    4                    5                    6                    7



How long did it take for your partner to reply?

1 = No Response yet    2 = Immediately    3 = 1-5 Minutes    4 = 6 – 10 Minutes

5 = 11 – 15 Minutes    6 = 16 – 20 Minutes    7 = 21 – 25 Minutes

8 = 26 – 30 Minutes    9 = 31 – 35 Minutes    10 = 36 – 40 Minutes

11 = 41 – 45 Minutes    12 = 46 – 50 Minutes    13 = 51 – 55 Minutes

14 = 56 – 60 Minutes    15 = 1 – 2 Hours    16 = 2 – 3 Hours    17 = 3 – 4 Hours

What form of communication did your partner use to reply?

1 = Texting    2 = Facebook Message    3 = Twitter    4 = Email    5 = Snapchat

6 = GChat    7 = Yahoo Messenger    8 = Tumblr    9 = Instagram    10 = Kik

11 = Google Plus    12 = WhatsApp    13 = Viber    14 = Voxer    15 = HeyTell

16 = Other \_\_\_\_\_

What was the intent (content) of your partner's reply?

1 = Request Information/ Question    2 = Give Information    3 = Flirt

4 = Complaint/Criticism    5 = Request Something    6 = Compliment    7 = Sexual

8 = Apologize    9 = Make Plans    10 = Joke/ Humor    11 = Other \_\_\_\_\_

Did you perceive the response as positive or negative?

1 = Positive    2 = Negative

Please rate your mood when you received the reply.

Very Happy    Somewhat Happy    Neutral/mixed    Somewhat Unhappy    Very Happy

1                    2                    3                    4                    5                    6                    7

Please rate your level of satisfaction with this interaction.

Very Dissatisfied

Neutral/mixed

Very Satisfied

1

2

3

4

5

6

7

Please rate your current level of relationship satisfaction.

Very Dissatisfied

Neutral/mixed

Very Satisfied

1

2

3

4

5

6

7