Text or Call?: How Mode of Communication Impacts Desire for Subsequent Conversation

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Text or Call?:

How Mode of Communication Impacts Desire for Subsequent Conversation

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Psychology

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Abstract

Previous research has found that there is variability in the effectiveness of different types of digitally facilitated communication, but no research has been conducted on whether the mode of communication being used impacts the desire to engage in subsequent conversations with a particular individual. This study examined whether the mode of initial communication would have an impact upon the desire to engage in subsequent conversations. In a sample of 33 participants ages 18-22, I sought to examine how phone conversations and texting differ as methods of initial communication in regard to their impact on participants’ expressed desire for continued communication. In order to examine this relationship, I conducted an experiment in which I randomly assigned subjects to either call or text a confederate. After the experiment, participants completed a survey in order to measure their desire to engage in further communication with the confederate. An independent samples t-test was conducted to compare participants’ desire for subsequent communication in phone calling and texting conditions. Our hypothesis was that there would be a significant difference in the desire to engage in further communication as a direct result of the mode of communication being used. There was no significant difference found between the calling and texting groups, suggesting that in regard to fostering a rapport after an initial meeting, there is no difference between calling and texting.

*Keywords:* mobile phones, mode of communication, texting
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Introduction

In an age where technology is increasingly used to facilitate communication (Poushter, 2016), it is important to try to understand the strengths and limitations of the various types of communication. Many relationships, including romantic, platonic, and business relationships, are formed through the usage of technologically facilitated modes of communication. Therefore, it is important to identify what variables factor in to fostering a rapport with someone after an initial conversation. If it is the case that the mode of communication that is used to meet someone for the first time has an impact on the desire to initiate subsequent communication, then it would be useful to be aware of that when deciding upon what mode of communication to use when contacting someone for the first time.

Mode of Communication

In this study, the mode of communication refers to the method one uses to interact with another individual. Various modes of communication include face to face conversations, phone calls, and text based communication. Technology facilitated modes of communication are particularly important to investigate because technology has changed over time to invent new ways of communicating.

Digital Modes of Communication.

Telephones were first invented in 1876 by Alexander Graham Bell (Hochfelder, 2018). The invention of the telephone allowed people to communicate with each other verbally over long distances. Following this, mobile phones were invented, becoming increasingly prevalent. The first mobile phone that was not connected to a landline or car was tested in 1973 by Martin Cooper, a researcher and executive working for Motorola (Knesel & Walz, 1973). The mobile phone was only capable of voice calls, similar to landline phones, and it was not until 1993 that
phones with the ability to send text messages were introduced. These phones with text message capabilities were introduced in Europe when the GSM mobile phone network became commercially available (Ling & Baron, 2007). The invention of the mobile phone, and the subsequent development of the text messaging feature, allows individuals to communicate over long distances from nearly anywhere.

Phones and mobile phones were not the only forms of technology to emerge to allow for fast communication over long distances. The internet was first developed in 1969, eventually becoming accessible for commercial use in the early 1990’s (Beranek, 2007; Weis 2010). The invention of the internet, similarly to mobile phones, also allowed for the ability to send text based messages to people in different locations. The first smartphone was released in 1994 by IBM, though it was not until later on that smartphones could compete with other mobile phone designs. Smartphones as they are known today are the combination of mobile phones and the internet, allowing users to both make verbal phone calls as well as sending instant messages (Aamoth, 2014). Modern day smartphones allow individuals to have access to several means of communicating with others. These include the ability to make phone calls, send text messages, or connect to the internet to send emails or instant messages. It is also possible to send photos or make video calls using smartphone or computer based applications such as Snapchat, Skype, LINE, Facebook Messenger, and many others.

With the invention of mobile phones and the internet, technology facilitated communication is becoming increasingly common in modern society. The Pew Research Center found that 92% of American adults own a cellphone, and 68% of American adults own a smartphone. Also, 97% of young adults aged 18-29 who own cell phones use text messaging (Anderson, 2015; Duggan & Rainie, 2012). It has become more common for people to meet
other people online or over the phone, forming new social or business connections (Wolak, Mitchell, & Finkelhor, 2003; Dwyer, Hilz, & Passerini, 2007; Chen, 2014). If differences exist between the various modes of communication, being aware of them will allow individuals to make an informed decision on what type of communication best suits their needs.

Technology facilitated communication is used by individuals of many different age groups, albeit for different purposes. A study conducted by Thayer and Ray found that young adults are more likely than middle aged and older adults to use online communication to meet new individuals and talk to friends, though all age groups used online communication to communicate with family and coworkers. For young adults in particular, as well as younger generations, mobile phones and the internet have been accessible for most if not all of their life, so it is possible that they are more comfortable with using this technology (Thayer & Ray, 2006). Young adults, as well as other young demographics who have grown up with access to mobile phones and the internet, utilize phone based or computer based modes of communication extensively in maintaining their relationships (Wolak et al., 2003; Choi & Toma, 2014; Billedo, Kirkhof, & Finkenauer, 2015; Christopher, Poulsen, & McKenney, 2016; Toma & Choi, 2016). Given the extent to which texting and online communication is used by younger individuals, it may be the case that these individuals are very familiar with how to use technology facilitated modes of communication to convey information effectively.

**Media Richness Theory.**

As a result of digital communication becoming widely used, particularly among younger generations, some researchers have conducted studies in order to determine whether there are differences in the effectiveness between different modes of communication. One of the prevalent theories in this regard is the media richness theory (Daft & Lengel, 1986), which states that if a
mode of communication allows for more nonverbal cues to be transmitted, it will be more effective at conveying nuanced information than a mode which restricts nonverbal cues will be. When it is not possible to convey information in a straightforward manner, media richness theory indicates that a richer mode of communication is necessary to ensure that the proper meaning is conveyed (Daft & Lengel, 1986). For example, in situations where an individual expresses themselves using words which have multiple meanings, the presence of nonverbal cues might provide more context and allow the intended meaning to be conveyed without needing additional explanation. Subsequent research has expanded upon media richness theory by examining how the theory applies to different modes of communication as well as different situations.

It appears that each mode of communication may serve a unique purpose, and that each type of communication has tasks which they are best suited for (El-Shinnawy & Markus, 1997; Sheer & Chen, 2004). Based upon the premise put forth by media richness theory, some situations might call for a richer mode of communication which allows nuanced information to be conveyed effectively, whereas if the message is straightforward a less rich mode of communication might be faster or easier to use. For instance, Nardi, Whittaker, and Bradner (2000) state in one study that texting is useful for quick and informal communication. In instances where individuals desire to convey shorter, less ambiguous messages, a text based mode of communication is still effective (Nardi, Whittaker & Bradner, 2000). It has not been conclusively determined whether the instant messaging function of phones is at a disadvantage to verbal phone conversations when conveying less nuanced information, so it is possible that the media richness theory may only be applicable in situations explicitly related to conveying nuanced information. For situations where a rapport is being built, it may be the case that the ability to convey more nuanced information is an important feature to possess.
The original media richness theory applies specifically to interpreting information, which means that the theory may not directly apply to other situations. Several studies have found that there is no difference in performance on decision making tasks that involve nuanced information. Regardless of the mode of communication being used, there were no differences in the quality of the decisions, the time it took to reach the decisions, or individuals’ satisfaction with the communication involved (Dennis & Kinney, 1998). Additionally, while the original study characterizes text based communication as the leanest form of communication due to its lack of nonverbal cues (Daft & Lengel, 1986), there is evidence suggesting that text based communication is not a less rich form of communication than conversing verbally over the phone, because the usage of emoticons allows for additional nonverbal cues (Lo, 2008).

**Nonverbal Cues.**

Emoticons, also known as emojis, mimic expressions or convey emotions. While expressions are a nonverbal cue which are only explicitly present in face to face communication, emojis are sometimes used to mimic these expressions or express emotion in text (Lo, 2008). One of the earliest instances of emojis was “:),” which was used in 1982 on a message board by a group of researchers. This is an example of an emoji which is possible to create using an alphanumeric keyboard. Later on, a smile symbol was created to serve the same purpose. Over time, more expression symbols were developed, made possible by the progression of technology (Lebduska, 2014).

Text based communication, such as instant messaging and text messages, does not implicitly include the nonverbal cues present in speech, but there are various ways to convey additional nonverbal cues through text. Although most interjections are not officially listed as words, they are verbal sounds which express emotion. It is possible to replicate verbal
interjections in text form by approximating the sound. Examples of this include interjections such as “aw” or “er”. It is also possible to mimic the sound of drawing out an interjection in text by extending one of the letters to make the word longer (Crystal, 2003). In regard to text messaging specifically, several studies found that individuals use certain punctuation marks for specific purposes, suggesting that punctuation has been adapted to convey additional meaning, thereby enriching text based communication (Hancock, Landrigan, & Silver, 2007; Ling & Baron, 2007). While these studies do not discount the applicability of the media richness theory, they do suggest that the different modes of communication are not easy to categorize as being richer or leaner. It is also possible that additional nonverbal cues can be added depending upon how an individual adapts their usage of a particular mode of communication.

There are numerous ways in which individuals have adapted to express emotion or construe meaning from what is available through text. The number and type of emoji being used conveys emotion and adds additional meaning to a message (Ling & Baron 2007; Lo, 2008). Although it has not been determined whether emojis can effectively substitute for expressions present in face to face communication, they do have an impact upon the message being conveyed. Abbreviations and acronyms are also used in conveying emotions or reactions, particularly in text messages and instant messaging (Ling & Baron, 2007; Possel, n.d.). Acronyms and abbreviations are used to refer to long words or strings of multiple words. Examples include expressions such as “LOL” or “BRB” (Possel, n.d.). In addition to shortening words and expressions, individuals also convey additional meaning through the length of the message itself, as well as the type, number and consistency of punctuation marks (Ling & Baron, 2007; Hancock et al., 2007). In a study conducted by Ling and Baron, it was found that American college students utilized these methods of conveying additional meaning through text
messages (Ling & Baron, 2007). Similarly, another study found that longer messages and usage of multiple punctuation exclamation marks were used by happy individuals, while sad individuals tended to use less words. The emotion of the individual writing the message was also successfully conveyed to the other person, even though the emotion was not explicitly stated (Hancock et al., 2007). Another study found that some adolescents tend to assume an emotional reason behind a lack of quick responses to text messages (Christopher, Poulsen, & McKenney, 2016). In contrast to this, a study on undergraduate students found that the quality of a text message from a romantic partner was more important than the frequency (Toma & Choi, 2016). A study on individuals from ages ranging from 18 to 39 found that similarity in text messaging behaviors predicted relationship satisfaction (Ohadi, Brown, Trub, & Rosenthal, 2018), which indicates the presence of specific texting styles. Each of these studies were conducted with different demographics, so it is possible that age impacts preference for quantity or quality of text messages.

**Appeal of Continued Communication**

The appeal of continued communication refers to the desire that an individual has to continue communicating with another person, both in general and specifically by using the same mode of communication. Continued communication is the foundation upon which relationships are built (Smith & Duggan, 2013; Billedo et al. 2015; Toma & Choi 2016). This includes not only friendships and romantic relationships, but also business relationships as well (Gersick, Dutton & Bartunek, 2000). If communication with someone ceases after the initial meeting, this limits opportunities to continue to build connections with that person. Young adults depend upon being able to foster relations with others and create a social network that can help support them
during specific points throughout young adulthood (Carbery & Buhrmester 1998). As such, it is important to examine how one can best ensure continued communication.

Networking and forming connections with prospective employers or other career relationships is one type of relationship which may be aided through the use of technology facilitated modes of communication. Candidates in a job interview who make better impressions upon an interviewer in an initial interview tend to receive more offers and higher ratings (Barrick, Swider, & Stewart, 2010). This suggests that it is both possible and beneficial to build a rapport with an interviewer during an initial meeting. Considering that some interviews are conducted over the phone, the potential differences between the mode of communication being used in an interview are important to consider. A study conducted to compare face to face, phone, and interactive voice response style interviews, finding that there was no negative differences between the different modes of communication (Bauer, Truxillo, Paronto, Weekley, & Campion, 2004). This indicates that a lack of nonverbal cues might not inhibit forming a rapport with another person, allowing phone based communication to be effectively used to meet a new person.

In regard to existing business connections, the usage of technology facilitated communication may aid in maintaining important work relationships. Peer relationships in particular are important in career settings. A study conducted by Kram and Isabella (1985) found that peer relationships facilitate advancement in career through providing advice and support. This suggests that with increased access to peers, particularly coworkers who would be familiar with an individual’s field of work, individuals will be able to make more advancements. It is therefore beneficial to maintain work relationships, so the increased access which phones and
internet based modes of communication provide may allow individuals to both maintain and draw from these work relationships.

A common use of online and phone based modes of communication, particularly among younger individuals, is communicating to build and maintain romantic relationships. For undergraduates, phone calls and text messaging are used in relationships, often on a daily basis, to maintain a relationship (Toma & Choi, 2016). In addition to modes of communication which are facilitated by phone, relationships are also maintained through the internet. A study conducted by Billedo, Kerkhof, and Finkenauer (2015) found that social networking websites are used by young adults to maintain relationships and connect with their romantic partner. Long distance relationships in particular use social networking websites to maintain their relationship and monitor their partner, engaging in these behaviors more often than individuals who are in relationships where they are geographically close to each other (Billedo et al., 2015).

Adolescents also often engage in forming online relationships, particularly when they are having difficulties with relationships which they have with parents or peers (Wolak et al., 2003; Christopher et al., 2016). In regard to romantic relationships among adolescents, a study conducted on adolescents in romantic relationships indicates that adolescents who find face to face interactions difficult or anxiety provoking rely primarily upon text messaging as the primary mode of communication for their romantic interactions. Additionally, text messaging has taken the place of passing notes among peers, suggesting that text messaging is commonly used in platonic communications as well (Christopher et al., 2016). This replacement of physical notes with digital messages indicates that technology, cellphones in particular, is widely used by younger individuals in maintaining their relationships.
With the current frequency at which people maintain relationships using technologically facilitated modes of communication, it is likely that any differences which exist between various modes of communication in their ability to foster a desire for subsequent communication will have an impact upon people’s overall ability to form relationships. According to a study conducted by Smith and Duggan (2013), online dating applications and websites have become increasingly popular in recent years. Beginning a relationship online relies upon fostering a desire for continued communication between individuals who meet on a website. Frequently, online dating websites and applications include a written profile or rely heavily upon text based communication, and many of these websites have a significant success rate (Smith & Duggan, 2013). The ability for dating websites to foster so many strong relationships suggests that the usage of text based communication is able to effectively foster a desire for continued communication.

One study claims that in regard to romantic relationships, long distance relationships are more resilient in the long run because relying on a form of communication which restricts nonverbal cues allows an individual to come across more favorably than they would in person (Crystal Jiang & Hancock, 2013). This suggests that a less rich form of communication may have a positive impact upon how appealing the prospect of continued communication with that individual is. In contrast to that, other studies suggest that individuals who spend a lot of time texting tend to be less satisfied in a relationship (Reid & Reid, 2004; Park, Lee & Chung, 2016). These conflicting results make it difficult to determine what motivations lead to a desire for continued communication with others, or what impact technology has in that respect.

**Current Study**
This study focuses on the potential differences that exist between two common modes of communication - phone calling and text messaging. Specifically, the study examines how the usage of these modes of communication impact an individual’s desire to engage in subsequent communication with another individual by examining if differences exist between calling and texting, which are understood to have differing levels of richness.

People frequently meet other people through technology, sometimes to establish new personal relationships, and sometimes to conduct interviews or acquaint oneself with business associates. As such, it will be very useful to know if the mode of communication influences how appealing it is to continue conversing. It seems probable that there will be a difference between both phone conversations and text messaging in that regard. As described, the widely cited and accepted media richness theory suggests that text based communication is a ‘less rich’ method of communication than phone conversations, as nonverbal cues such as inflection and tone are filtered out (Daft & Lengel, 1986). Other studies suggest that text based communication is not as limited as it may initially appear to be (El-Shinnawy & Markus, 1997; Nardi, Whittaker & Bradner 2000; Lo, 2008). There is not an overall consensus on how verbal and text based methods of communicating differ, but a difference between the methods has been observed when examining how effective each mode of communication is (Sheer & Chen, 2004). Effectiveness is likely to lead to differences in levels of satisfaction associated with use of different modes of communication, and as such it may potentially lead to individuals finding the individual that they are conversing with to be more appealing. Given that differences have been found between modes of communication, but no consensus has been reached regarding which mode is best, it is hypothesized that there will be a significant difference in the desire to engage in further communication between people who meet via text and people who meet via phone conversation.
However, no specific hypothesis is being presented as to whether texting or calling will predict greater likelihood of desire for continued contact, given the mixed results of previous studies.

**Method**

The current study seeks to determine if the mode of communication a person uses impacts their desire for subsequent communication. The desire for subsequent communication refers to how willing a person would be to continue interacting with another individual in the future. If a participant has a desire for subsequent communication, they are willing to have more conversations with the person who they were speaking to. Verbal phone conversations and text based phone conversations are the two modes of communication being focused upon in this study. The prevalence of cell phones within the United states makes the subject of phone based communication particularly pertinent to the modern day (Anderson, 2015; Duggan & Rainie, 2012). Additionally, experiences of conversation which happen over voice and text based conversation are more effectively controlled, in contrast face to face communication which includes the potential confounding variables such as a person’s gender, ethnicity, or other visual cues related to their general appearance and demeanor.

**Participants**

33 male and female young adults with ages ranging from 18-22 were recruited to participate in the study. Answers to the demographic questions on the survey indicated that the majority of participants were white (78.8%, n = 26), female (69.7%, n = 23), and not in a committed relationship (66.7%, n = 22). Most participants fell between the ages of 19-21 (81.8%, n = 27) and similarly their class standing was within the range of sophomore to senior (75.8%, n = 25). Table 1 describes the full demographic makeup of the sample. Recruitment was
conducted through emails sent out to the Pforzheimer Honors College and Psychology department, as well as through Facebook.

**Materials**

Every participant was required to use their own cell phone in the experiment. This cellphone had to allow texting to be done easily and efficiently, in order to ensure that the text conversations would all be approximately the same length. In order to achieve this, only smartphones and cell phone with a full keyboard were included in the study. The confederates involved in the experiment utilized a thematic script to guide the conversation during the experiment. A survey was administered following the experiment to determine the effects of the conversation and record demographic information.

**Measures.**

The desire for subsequent communication was measured on the survey with a single item designed by the researcher: “I would be willing to have another conversation with the person I just met”, with response options ranging from 1 = “strongly disagree” to 6 = “strongly agree”.

Two items were used to assess the overall impression participants had about the confederate with whom they spoke. These were: “This person was likable”, and “Speaking to this person was enjoyable”. Potential responses to these questions ranged from 1 = “strongly disagree” to 6 = “strongly agree”. These items were included in order to assess the potential influence of the experience of the conversation itself upon the main variable, desire for subsequent communication.

Preference for a particular mode of communication was assessed within the survey using a single item developed by the researcher. This item stated: “Do you prefer to call or text people when communicating with them over the phone?” and potential responses included “I prefer to
call”, “I prefer to text” and “It depends on the situation”. This construct was included in order to ensure that both groups were equivalent to each other in regard to what type of communication participants were more familiar or comfortable with.

Finally, the participants’ attachment to their phone measured by a six item attachment to phone scale. The scale used two subscales, the phone refuge and phone burden subscales. (Trub & Barbot 2016). This was included as a control, to ensure that the two groups did not have significantly different levels of attachment to their phones.

**Procedure**

After receiving IRB approval for the experiment and after participants were recruited, participants were given a date and time to contact a particular number in order to engage in the experiment. Each of these participants were randomly assigned to one of two conditions: calling and texting. The calling group met the confederate through a verbal phone conversation, and the texting group met the confederate through a text messaging conversation. In both conditions, every step of the procedure was explained to the participants and they were given the consent form. Participants were told that they would be meeting someone over the phone, and that following that they would be asked a series of questions about their experience. Participants were given a link to the survey which included the consent form, and told to call or text the number at their scheduled time, depending upon which condition they were assigned to. The numbers given to participants belonged to the two confederates involved in the study, and each participant was randomly assigned to communicate with one or the other. One of the confederates was male and the other was female in order to control for any preexisting ideas or impressions that the participants might have in regard to gender. Participants were randomly assigned to one confederate when being assigned to the calling or texting condition, resulting in four groups of
participants. Each participant was given ten minutes to talk to the confederate using the mode of communication which they were assigned.

Confederates were given a script to follow in order to keep the conversation focused and create consistent responses to participants. This script was designed to encourage the participants to make small talk with the confederate, while still keeping the parameters loose enough to allow the conversation to feel spontaneous. Confederates were informed in the script to express solidarity and reassurance if the participants expressed nervousness or confusion, and the confederates were given several general questions to ask the participants in the event that there was a lull in the conversation. The purpose of the script was to ensure that the allocated time was used efficiently, and to ensure that each participant would learn a similar amount of information about the confederate. It was also used to allow the confederates to maintain a consistent persona and demeanor in all conversations. The phone conversation and texting scripts were both the same, and confederates assumed an identity based upon the script so that the conversations would be as similar as possible. Both the texting and calling script specified to keep the tone calm and express polite interest in everything the participant had to say. The texting script also included the specification to periodically use emojis in responses, primarily in any responses that were four words or less. This was done in order to prevent short responses from seeming curt or disinterested. Emojis were included as a part of the script for text messaging because they are a functionality of text based communication, and they may be an important aspect of texting in regard to communicating nonverbal information (Lo, 2008).

In the calling condition, participants met their assigned confederate after they called them on their cell phone. After ten minutes of communicating with each other over the phone, the confederate concluded with a remark to signal the end the conversation. In the texting condition,
participants met their assigned confederate after they sent a text message to them. After ten minutes of communicating with each other through text messaging, the confederate sent a text to signal the end of the conversation. Both concluding remarks were identical to each other in order to maintain similarity between the conversations. Once the conversation ended, participants in both conditions took a survey which asked them to rate their feelings towards the confederate and to rate their desire for subsequent communication or lack thereof. Participants were made aware at the beginning of the survey that responses were anonymous, and surveys were linked to a particular group using the numbers 1-4. Groups 1 and 2 were assigned to the calling condition, with group one calling the first confederate and group 2 calling the second confederate. Groups 3 and 4 were assigned to the texting condition, with group 3 texting the first confederate and group 4 texting the second confederate. The designated group numbers were distributed to each participant along with the link to the survey. This group number indicated which confederate the participant was communicating with, as well as the mode of communication that was used, but any messages connecting participants to a specific group were destroyed upon the completion of the study. After finishing the study, the participants were debriefed about the focus of the experiment and any lingering questions about the experiment that they had were answered. During this debriefing, some participants reported feeling a brief feeling of anxiety when first contacting the confederates, but also indicated that this feeling quickly subsided and that the overall experience was positive.

After gathering all of the data, the data was cleaned using SPSS and demographic data was recorded in Table 1. Following this, preliminary analyses were conducted in order to determine whether there were differences between the conditions in regard to demographics, phone use preference, and phone attachment. These analyses included chi square goodness of fit
tests to test for phone use preference and demographic variables, and two independent samples t-tests for each subscale on the phone attachment measure. A Pearson product-moment correlation coefficient was calculated for the conversation experience construct in order to determine if enjoyment of the conversation and likability of the confederate were related to desire for subsequent communication. For the main analyses, an independent sample t-test was conducted to analyze the results of the experiment and test the study’s hypothesis. This test was used to compare the mean scores for desire for subsequent communication because there are two independent groups being studied, the calling and texting groups, and only one continuous variable was being measured.

**Results**

**Preliminary Analyses**

This study aimed to examine the difference between calling and texting on desire for subsequent communication. First, preliminary analyses were conducted. Table 2 includes descriptive statistics for the main variables in the study. These variables include desire for subsequent communication, confederate likability, enjoyment of conversation, and both subscales of attachment to phone. On average, participants were very open to the idea of engaging in further conversation with the person they met, with a mean score of 4.85, suggesting that most participants were open to the desire for subsequent communication with the confederate. Additionally, participants also found the confederate to be likable, with a mean score of 5.06, and enjoyed the conversation, with a mean score of 5.03.

Answers to the phone use preference item and demographic questions were analyzed using a series of chi-square test of goodness of fit tests to ensure that there were not differences between the texting and calling groups. The results for Gender, $\chi^2(1, n = 33), p = .455$, Ethnicity,
\( \chi^2 (3, n = 33) = 3.807, p = .455 \), \( \chi^2 (4, n = 33) = 5.900, p = .207 \), Class Standing, \( \chi^2 (6, n = 33) = 9.878, p = .130 \), Relationship Status, \( \chi^2 (2, n = 33) = 2.271, p = .321 \), and Phone Use Preference, \( \chi^2 (2, n = 33) = 5.038, p = .081 \). As all of these analyses were not significant, it was ascertained that there were no differences between the two conditions on these variables.

A 1-tailed Pearson product-moment correlation coefficient was conducted to compare desire for subsequent communication with the variables directly associated with the experience of the experimental conversation. These results are reported in Table 3. The results of this test found that desire for communication was strongly correlated to both confederate likability, \( r = .560, n = 33, p = .000 \), and enjoyment of conversation, \( r = .875, n = 33, p = .000 \). Two independent samples t-tests were conducted in order to determine whether these variables were significantly different between groups. The results of these tests are reported in Table 4. There was not a significant difference between the calling and texting groups for confederate likability, \( t(31) = .807, p = .426 \), or for enjoyment of the conversation, \( t(31) = 1.682, p = .103 \). This suggests that these variables were approximately the same in both groups, so these constructs were not included in the main analysis.

Two independent t-tests were conducted to determine differences between the calling and texting groups in regard to their scores on the attachment to phone subscales. The results of these tests are reported in Table 5. Descriptive statistics for the phone attachment subscales are reported in Table 6. There was not a significant difference between the calling and texting groups in regard to the phone burden scale, \( t(31) = .646, p = .523 \). However, there was a significant difference found in regard to the phone refuge subscale, \( t(31) = 2.304, p = .028 \). The calling condition \((M = 2.9762, SD = .70969)\) had a higher mean score on the phone refuge subscale than the texting condition \((M = 2.4211, SD = .66520)\). In order to determine whether the phone refuge
construct significantly influenced desire for subsequent communication, a Pearson product-moment correlation was calculated to determine any relationship between the variables. These results were not significant, $r = .141$, $n = 33$, $p = .434$. This indicates that scores on the phone refuge scale are not related to desire for subsequent communication.

**Main Analysis**

An independent samples t-test was conducted in regard to desire for subsequent communication, comparing the mean scores of the texting group and the calling group. Results of this test are reported in Table 7. No significant difference was found [$t = .822$, $p > .05$]. This does not support the hypothesis that there will be a significant difference between the two groups in desire for subsequent communication, suggesting that calling and texting are equally effective in fostering a desire for subsequent communication.

**Discussion**

No significant difference was found between the calling and texting groups in the participants’ desire for subsequent communication. This suggests that texting and calling are equally effective in fostering a desire to continue communicating with another person. In general, most participants expressed an interest in engaging in more conversations with the confederate, and reported finding the conversation itself enjoyable, regardless of the mode of communication or which confederate they were speaking to. This may indicate that enjoyment of the conversation contributes to fostering a desire for subsequent communication.

Media richness theory indicates that the presence of more nonverbal cues makes verbal communication more effective at conveying nuanced information than text based communication. The results of this study do not support or refute media richness theory, since the focus of the current study was specifically related to fostering a desire for subsequent communication.
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communication. However, the outcome of the current study does suggest that in regard to forming a relationship with a person in an initial meeting, there is no difference between texting and calling the person.

It may be that texting and calling do not differ significantly in how rich of a mode of communication they are. As some previous studies suggest, the usage of emojis and punctuation may provide additional nonverbal cues (Hancock et al. 2007; Ling & Baron 2007; Lo, 2008).

With the lack of nonverbal cues present through text alone, it is possible that individuals have adapted to expressing emotion through other methods. Examples of this may include emojis and punctuation, as mentioned earlier, but may also include capitalization, length of responses, the number or frequency of emoji’s used, or including or lengthening interjection words. Examples of interjection words include words such as “huh” or “ugh”, and are used to varying extents depending on the preference of the individual (Crystal, 2003). Additionally, acronyms such as “LOL” or “IMO”, are used commonly in phone based messaging as well as computer based instant messaging (Possel, n.d.). This indicates the development of expressions in order to convey information more quickly using the available tools present in a given mode of communication. Considered altogether, there are many nonverbal cues which have emerged in text based communication, so it would be worthwhile for subsequent research to examine their efficacy to determine if these additional cues are able to compensate for the difference in the availability of nonverbal cues between verbal and text based communication.

Another potential explanation for the apparent similarities between verbal and text based modes of communication is that the particular scenario being examined by the current study does not primarily rely upon conveying nuanced information. The original concept of media richness theory focuses upon conveying information which may have multiple interpretations, which is
not necessarily the case here. The type of information being conveyed through the conversation was predominantly straightforward, generally focused upon simple questions and answers. All the information being conveyed by the confederates was included in the script that the confederates were given, which included a general disposition to maintain throughout the conversation along with conversation topics to include. In both verbal and text based modes of communication, participants expressed a similar amount of descriptive information and achieved a similar overall impression of the confederates. However, the conversation in every instance would eventually evolve to become more complex, involving more detailed and less straightforward information. The theory behind media richness theory should still apply, though similarly to a previous study which found that in interview settings, lack of nonverbal cues was not a disadvantage, it may be that media richness theory does not apply to the particular situation being studied (Bauer et al., 2004).

It is also possible that 18-22 year old young adults have adapted to feeling comfortable with texting since they were growing up around the time that computer and phone technology were rapidly developing and becoming more widespread. This familiarity may indicate that young adults, as well as younger cohorts, are able to infer more information about a person from text alone than previous generations. This is supported by the responses to an item which asked participants what their preference was when communicating with another person over the phone. A large portion of participants responded that they preferred to text, with a similar number of participants indicating that their preference depended on the situation, and only 7% of participants indicating that they preferred to call. Participants with different phone usage preferences were evenly distributed among the calling and texting groups in the experiment, but their tendency to prefer phones or be ambivalent may suggest that young adults are immensely
familiar with text messaging. If there are any subtle cues which can be conveyed through text, such as variations in the style of response, individuals who are very familiar with texting may be more likely to be aware of them. Considering this, it is important for future research to examine older and younger demographics to determine if the results of the current study may be generalized to other age groups.

It is also notable that there was no significant difference between the experimental groups in regard to how enjoyable participants considered the conversation to be. This suggests that participants in both groups had a similar experience regardless of the mode of communication they were using. Likewise, there was not a significant difference between the texting and calling group in how likable they felt the confederate to be. This is particularly interesting since during the briefing before the study, the majority of participants reported feeling nervous to initiate the conversation in both the texting and calling conditions, but after participants were debriefed many in every group remarked that the conversation felt shorter than they had anticipated. This trend suggests that meeting new people is an unfamiliar situation, either through text or verbal communication, but more effective at fostering a desire to continue communicating than the participants of the study had expected. Additionally, the results of the study suggest that participants had a similar perception of the confederates and the conversation overall, indicating that there is likely no immediate benefit to using one particular mode of communication when attempting to create a rapport with another person during an initial meeting. The experiment does not offer insight into how these results would change after subsequent conversations, and future research should look into whether the effects of calling or texting deteriorates or improves over time.
There is no evidence to determine whether a lack of enjoyment or a dislike of the confederate would change the results found in the study. Only one participant indicated a strong dislike of the confederate whom they spoke to, answering “strongly disagree” on the question of likability. However, while this participant also answered “somewhat disagree” when asked if they would have another conversation with the confederate, they answered “agree” when asked if they enjoyed speaking to the confederate. Most other participants rated their experience very favorably, resulting in a high mean score on desire for subsequent communication, as well as high mean scores for enjoyment of conversation and confederate likability. The high scores indicate that both phone calling and text messaging are effective modes of communication in forming a rapport with a stranger. The results also suggested that confederate likability, enjoyment and desire for subsequent communication are related to each other. However, with only one result connected to lack of enjoyment of conversation or lack of confederate likability, it is difficult to determine this conclusively.

**Directions of Future Research and Limitations**

Future research may also benefit from examining the specific mechanisms which contribute to the desire for subsequent communication. It may be the case that these mechanisms may differ between modes of communication, even though there were no observed differences between the calling and texting conditions in the final outcome. One potential variable which could be examined is enjoyment of conversation, which appears to be related to desire for subsequent communication. Manipulating the level of enjoyment individuals experience during a conversation may reveal differences between calling and texting, or it might be determined that enjoyment of the conversation an important variable that directly influences desire for subsequent communication.
One of the limitations of the study was that the confederates were instructed to maintain a neutral but polite disposition, which may have influenced the majority of participants to find the confederate likable in each group. Only one participant indicated a dislike of the confederate, meaning that the observed results may only apply to situations where an individual feels that the person whom they are speaking to is likable. There is a possibility that the mode of communication might show some differences in regard to how negatively a less pleasant persona would be conveyed, but in order to study this it would be necessary to conduct research specifically on whether having an unpleasant conversation influences participants’ responses. This would be difficult to study without putting participants through an unpleasant experience, so the current study only utilized a polite characterization of the confederates’ persona. Any future research into the potential relationship between likability, enjoyment of communication, and desire for subsequent communication will have to be carefully designed in order to minimize discomfort of participants. Such research would provide an important insight into more varied experiences with phone based modes of communication, so in a carefully controlled setting it might be possible for future research to explicitly determine whether lack of enjoyment or confederate likability can impact a desire for subsequent communication, as well as determining if this would create a significant difference based upon the mode of communication being used.

Another limitation of the study was the length of the experimental conversation. Participants engaged in a 10 minute conversation with the confederate, which is a relatively brief period of time to spend getting to know another person. The short duration of the conversation was chosen partially to prevent overburdening participants, and partially to avoid intimidating potential participants. Even at 10 minutes, many participants expressed that it seemed like the 10 minute conversation would last a long time, even though upon reflection they felt that it was not
as long as they had anticipated it being. Due to the difficulty in recruiting participants who were willing to converse with an unknown individual, the duration of 10 minutes was appropriate for this particular study. However, future research may benefit from conducting a similar study using longer conversations in order to determine if more extensive conversations display a more significant difference.

It may also be beneficial in any future research based upon this study to include a more diverse population and employ a truly random sample. Although participants were randomly assigned to the calling or texting group, participants in the study itself only included those who responded to recruitment rather than being randomly selected from the student population. It is possible that students who responded to the recruitment post were familiar either with the Experimental Psychology class which the study was conducted in, the researchers themselves, or with other participants who had participated and encouraged them to participate as well. Another limitation was in the limited diversity of the sample. There were no black or African American participants, and the sample was primarily white and primarily female (23 female participants and 10 male participants). The sample did have some diversity, including a somewhat diverse range of ages within the parameters set for the study, but ideally any replications of this study should try to include more a more diverse sample. Future research may also wish to include more young adults who are not currently enrolled in school, as only 4 individuals in the study were not currently enrolled in college.

**Conclusion**

The results of the study indicate that there is no significant difference between texting and calling in regard to instilling a desire for subsequent conversations. Both the calling and texting groups expressed a desire to have another conversation with the confederate, as well as
indicating that they found the confederate likable and the conversation enjoyable. Many participants also indicated a preference for texting or a situational preference for texting or calling. An interesting question which arises as a result of this study is whether familiarity with texting has an impact on how effective text messaging is as a mode of communication. If there is naturally a discrepancy in the number of nonverbal cues available through texting and phone conversations, then it may be the case that being familiar with text messaging improves the amount of information one is able to discern in a text conversation, thereby making the two modes of communication equally effective. It may also be that individuals simply feel more certain of their responses when they are more familiar with texting than they would be otherwise. In order to determine whether external factors such as familiarity impact how effective text messaging is, it is necessary to include more individuals who prefer calling to texting, or who are not particularly familiar with cell phones. This may be difficult given the prevalence of cell phones, so a study comparing different cohorts might be equally valuable and more practical.
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Table 1.
*Demographic Characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
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<tbody>
<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>Male</td>
<td>10</td>
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<td>19</td>
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<td>20</td>
<td>11</td>
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<td>21</td>
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<tr>
<td>22</td>
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<td>Senior</td>
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Table 2.
Descriptive Statistics of Experimental Variables

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<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Range</th>
<th>Skewness</th>
<th>Kurtosis</th>
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</thead>
<tbody>
<tr>
<td>Desire for Subsequent Communication</td>
<td>33</td>
<td>4.85</td>
<td>.795</td>
<td>3</td>
<td>-.111</td>
<td>-.555</td>
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<tr>
<td>Confederate Likability</td>
<td>33</td>
<td>5.06</td>
<td>.933</td>
<td>5</td>
<td>-2.580</td>
<td>10.738</td>
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<td>Enjoyment of Conversation</td>
<td>33</td>
<td>5.03</td>
<td>.770</td>
<td>2</td>
<td>-.053</td>
<td>-1.267</td>
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<td>Phone Refuge Subscale</td>
<td>33</td>
<td>2.6566</td>
<td>.72880</td>
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<td>.328</td>
<td>-.200</td>
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<tr>
<td>Phone Burden Subscale</td>
<td>33</td>
<td>2.2525</td>
<td>.79070</td>
<td>2.67</td>
<td>.083</td>
<td>-.909</td>
</tr>
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</table>

Table 3.
Correlation Between Confederate Likability, Desire for Subsequent Communication, and Enjoyment of Conversation

<table>
<thead>
<tr>
<th></th>
<th>Confederate Likability</th>
<th>Desire for Subsequent Communication</th>
<th>Enjoyment of Conversation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confederate Likability</td>
<td>-</td>
<td>.560**</td>
<td>.476**</td>
</tr>
<tr>
<td>Desire for Subsequent Communication</td>
<td>-</td>
<td>-</td>
<td>.875**</td>
</tr>
<tr>
<td>Enjoyment of Conversation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (1-tailed).
Table 4. 
**t-test** Results Comparing Calling and Texting on Confederate Likability and Enjoyment of Conversation

<table>
<thead>
<tr>
<th></th>
<th>Calling</th>
<th>Texting</th>
<th>t</th>
<th>df</th>
<th>Sig (2-tailed)</th>
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</thead>
<tbody>
<tr>
<td>Confederate Likability</td>
<td>5.21</td>
<td>4.95</td>
<td>.807</td>
<td>31</td>
<td>.426</td>
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<tr>
<td>Enjoyment of Conversation</td>
<td>5.29</td>
<td>4.84</td>
<td>1.682</td>
<td>31</td>
<td>.103</td>
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</tbody>
</table>

Table 5. 
**t-test** Results Comparing Calling and Texting on Phone Refuge and Phone Burden Subscales

<table>
<thead>
<tr>
<th></th>
<th>Calling</th>
<th>Texting</th>
<th>t</th>
<th>df</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone Refuge</td>
<td>2.9762</td>
<td>2.4211</td>
<td>.66520</td>
<td>31</td>
<td>.028</td>
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<tr>
<td>Phone Burden Subscale</td>
<td>2.3571</td>
<td>2.1754</td>
<td>.74011</td>
<td>31</td>
<td>.523</td>
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Table 6. 
Descriptive Statistics of Phone Attachment Subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness (SE .409)</th>
<th>Kurtosis (SE .798)</th>
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</thead>
<tbody>
<tr>
<td><strong>Refuge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel anxious or uncomfortable when I can’t check my phone</td>
<td>2.36</td>
<td>.895</td>
<td>.021</td>
<td>-.693</td>
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<tr>
<td>I feel naked without my phone</td>
<td>2.30</td>
<td>1.287</td>
<td>.702</td>
<td>.789</td>
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<tr>
<td>Having my phone makes me feel safer</td>
<td>3.30</td>
<td>1.015</td>
<td>-.855</td>
<td>.609</td>
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<tr>
<td><strong>Burden</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Being without my phone gives me a sense of relief</td>
<td>2.03</td>
<td>1.015</td>
<td>.509</td>
<td>-.928</td>
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<tr>
<td>I feel better when I don’t have my phone on me</td>
<td>1.67</td>
<td>.777</td>
<td>1.102</td>
<td>1.081</td>
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<tr>
<td>I intentionally put my phone out of reach to enjoy an activity I’m engaged in</td>
<td>3.06</td>
<td>1.144</td>
<td>-.258</td>
<td>-.488</td>
</tr>
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Table 7.
t-test Results Comparing Calling and Texting on Desire for Subsequent Communication

<table>
<thead>
<tr>
<th>Calling vs. Texting Condition</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calling</td>
<td>5.14</td>
<td>.663</td>
<td>1.898</td>
<td>31</td>
<td>.067</td>
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<tr>
<td>Texting</td>
<td>4.63</td>
<td>.831</td>
<td></td>
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</tbody>
</table>

THEMATIC SCRIPT

As a confederate, you are required to adhere to the following thematic script as closely as possible in order to ensure that all conversations are consistent with each other. Conversations by both phone and text will begin with the phrase: “Hi, I’m Dakota. It’s nice to meet you.” Conversations will end with the phrase: “Looks like the ten minutes are up. It was nice talking to you. Goodbye”.

Confederate Persona’s Personality:
Calm, level tone
No use of sarcasm
Respond with polite interest to participants

Confederate Persona Demographics
Name: Dakota
Age: 20
Student: Yes at Pace, Junior
Major: Psychology
From: Upstate, Albany, NY
Siblings: Younger Brother age 17
Pets: A golden retriever
Music Preference: Pop
Color: Blue
Work: Unemployed
Hobbies: Drawing & Photography
Travel: Been to Disney and likes hiking/camping in upstate New York
Questions that should not or cannot be answered in line with Dakota’s personality will be answered with some variation of “I don’t know”, followed by moving on to the next topic.

Topics of Discussion Introduced by confederate:
- Ask if participant is a student (what grade/major)
- Ask what hobbies participant has
- Ask participant to elaborate on hobbies/major
- Ask if participant has any travel experience
- Ask about favorite professor/favorite place/favorite food/favorite color/etc. (continue asking questions similar to this until the end of the 10 minute conversation)

Texting guidelines: Alphanumeric emoticons [ :) , :/ , :( ] will be used in responses of four words or less in order to supplement for the assurance of integrity of response.