

Reading between the Lines:
Gender Perception of Lean Media

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“LORD, you establish peace for us; all that we have
accomplished you have done for us.” – Isaiah 26:12

This project is dedicated to my parents, brother, and husband –

Terry and Karen Jarrett

Jason Jarrett

Matthew Conner

-Who have always encouraged and prayed for me in both the good times and the bad.

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Abstract

Over the years, communication methods have evolved from face-to-face conversations to computer-mediated communication including: e-mail, instant message, and text message interactions. Since the methods have changed, a large aspect of communication, nonverbal cues, have become nearly impossible. These methods of communication that lack nonverbal cues are therefore referred to as lean media because they lack the richness of facial expression, vocal expression, and immediacy. In order to modify more recent forms of communication to include nonverbal cues, individuals have created their own nonverbal cues. While each individual is unique, though, genders normally tend to think or behave in similar fashion. This quantitative study researches the aspects of communication that deal with lean media and the gender perceptions that follow. This research focuses on three hypotheses: (1) Females tend to use more nonverbal cues than males when interacting in computer-mediated communication. (2) Females tend to perceive confusion at a higher rate than males when using lean media during computer-mediated communication. (3) Females tend to perceive conflict at a higher rate than males when using lean media during computer-mediated communication. By posting an online survey, data was collected from 19 dichotomous and multiple-choice questions. A total of 300 individuals participated. The results revealed that females have a stronger tendency to use nonverbal cues when interacting on computer-mediated communication. They also showed how women generally receive confusion and conflict at a higher rate than men.

Key Words: Computer-mediated Communication, Lean Media, Gender, Perception

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Chapter 1

Introduction

Because communication is an important field to study, universities worldwide have developed various types of concentrations within that field including Interpersonal Communication and Media Communication. Unfortunately, they have been taught and studied independent of one another causing a deficiency in that common field. For instance, many studies have been completed about interactions among families, friendships, and coworkers, but only limited research can be found about those same interactions that include text messages, instant messaging, or social networking. Therefore, in order to fill some of that void of research, this study is going to focus on interpersonal interaction that takes place through computer-mediated communication. More specifically, it is going to concentrate on how individuals of differing genders influence both the verbal and nonverbal aspects of computer-based messages. It will also explore how lean media (text only) affects confusion and conflict in computer-mediated communication. Further, it will discover how gender affects the confusion and conflict received in these same messages.

Though limited, some research has been conducted about the subject of interpersonal relationships and their effects when handled through computer-mediated communication (CMC). In one study, the researchers discovered how the individuals they surveyed decided that face-to-face communication was more valuable than computer-mediated communication, yet they still used computer increasingly more as the medium in which to converse (Schiffrin, Edelman, Falkenstern, & Stewart, 2010). While this article stated a lot of statistics and viewpoints of their participants when comparing face-to-face and computer-mediated communication, it does not discuss the depth of the individuals' conversations or their feelings about them. Therefore, this

study was unable to explain the users' perceptions about the messages or whether they would choose that mode of communication to interact when in disagreement with their conversational partner.

Other research conducted by Doris Bollinger (2009) covered the words and symbols used in text based conversations that represent nonverbal or visual cues in a conversation. In her study, she explained how computer-mediated conversations lacked visual cues and social presence that were critical for important conversations. While she discussed how individuals used various online "nonverbal cues" in order to properly communicate their emotions, she did not discuss how perceptions and/or misperception lead to conflict (Bollinger, 2009). Therefore, this study focused on not only nonverbal cues online, but it also focused on individual's perceptions that could lead to either confusion or conflict. In order to narrow the study even further, the study concentrated on gender differences in regards to these issues.

This study will benefit users of any form of computer-mediated communication when they consider using it in order to discuss more serious topics, which could lead to misperception or conflict. While individuals normally handle conflicting topics face-to-face (FtF), many choose other methods of communication such as the telephone, e-mail, instant messaging, or text messaging. When using these methods, communicators are unable to use nonverbal cues such as facial expressions, specific tones (ex. sarcasm), or gestures. This type of communication is referred to as lean media because it lacks the depth of a conversation that includes various types of verbal and nonverbal cues. With the absence of nonverbal cues, individuals are not able to express themselves as freely as they would like. This study therefore sought evidence that showed if the lack of nonverbal cues hindered the message and caused confusion and/or conflict.

Individuals reading the results could then decide whether communicating via computer-mediated communication is the wise decision for certain conversations.

In order to discover more about the nonverbal cues used in computer-mediated communication, this study focused on gender differences and gender perceptions. Three hypotheses were stated regarding gender, nonverbal cues, and gender perception. The overall hypothesis about gender perceptions of lean media stated that females, who generally use more nonverbal cues than males, would perceive confusion and/or conflict at a higher rate than males. This information would then assist individuals in determining whether certain topics of conversation would be appropriate for computer-mediated communication or whether those topics should be saved for face-to-face conversations.

These hypotheses were stated as follows:

H1: Females tend to use more nonverbal cues than males when interacting in computer-mediated communication.

H2: Females tend to perceive confusion at a higher rate than males when using lean media during computer-mediate communication.

H3: Females tend to perceive conflict at a higher rate than males when using lean media during computer-mediated communication.

In order to understand the topic of this study, various terms and research need to be explained. Therefore, this thesis will be divided into six chapters. These chapters include: The introduction, the literature review, the methodology, the results and discussion, and the limitations and further possible research. The first chapter will introduce the topic and the reason for research. The second chapter will describe different studies and research already conducted concerning the topic of interpersonal interaction and computer-mediated communication. The

third chapter will explain the methodology (quantitative research) and describe the participants as well as the questionnaire used. The fourth chapter will discuss the results of the study and the implications of the study. Finally, the last chapter will explain how the limitations of the research, the strengths and weaknesses of the study, and how the topic could be researched further.

Chapter 2

Literature Review

Over time, communication mediums have changed from pony express to the telegraph, and, from telephones to instant messaging. Because of these changes, people have had to adapt and develop new ways of communicating with others in order to begin, mature, and maintain relationships. In recent years, one of the most popular methods of communication includes types of technology that allow immediate and precise messages that can be either text based alone or text complimented with video feed. Of the technological forms of computer-mediated communication (CMC), e-mails, text messaging, and instant messaging have become the most popular (Ramirez, Zhang, McGrew, & Lin, 2007). Because each of these mediums use technological functioning yet are still unique from one another, the term computer-mediated communication was coined to represent all types of interaction involving computers. This history of computer-mediated communication began over fifty years ago when computers were mainly used for information processing, data transfer, and hardware design. Years later, in the mid-1990s, personal computers emerged and allowed the rapid growth of interpersonal communication through the Internet which included emailing, chatting, and surfing. Computer-mediated communication is more specifically focused on human communication through the use of the computer medium, such as instant messaging or text messaging (Thurlow, Lengel, & Tomic, 2004).

Since CMC is a more recent form of communication, it is still a confusing and misunderstood medium as well (Wrench & Punyanunt-Carter, 2007). As people learn how to use the various mediums of computer-mediated communication, they will encounter confusion and lack of correct perception that will eventually lead to conflict. Before discussing perception and

conflict received through CMC, it is necessary to describe and define the theory as well as observe past studies about this topic. In order to do this, the next several sections will focus on several aspects of computer-mediated communication including: the definition, the comparison of CMC and face-to-face communication, various theories developed from CMC, individualized CMC, individual's perceptions when using CMC, and finally conflict that can develop from CMC.

Computer-Mediated Communication

In 1997, before the recent development of certain technologies, a good definition of CMC was “the process by which people create, exchange, and perceive information using networked telecommunications systems that facilitate encoding, transmitting, and decoding messages” (Romiszowski & Mason, 1997, p. 398). While some describe it as a process, others emphasize that computer-mediated communication is a tool. Jones (1995) states, “CMC, of course, is not just a tool; it is at once technology, medium, and engine of social relations. It not only structures social relations, it is the space within which the relations occur and the tool that individuals use to enter that space” (16). Yet, another way to describe computer-mediated communication is to break it down one word at a time. While “communication” represents the exchange of all information through verbal and nonverbal cues, “mediation” or “medium” is the technology that is used to transfer that information from the sender to the receiver. The term “computer” can be used to represent several different types of mediation, which include: computers, Internet, mobile phones, video conferencing, etc. (Locher, 2010). In order to organize these various types of mediation, they must be divided into synchronous and asynchronous forms of communication. Synchronous types of conversation involve immediate feedback and communication that include online chats, instant messaging, chat rooms, or text messaging. Asynchronous forms of

conversation involve delayed feedback, which comes from e-mails, blogs, or bulletin board forums (Locher, 2010; Boucher, Hancock, & Dunham, 2008).

While some people compare computer-mediated communication to television in that it has nothing to do with “real-life,” others realize that it is very much apart of reality and at times a more popular form of communication. Just as people can use words in face-to-face communication (FtF) to encourage or discourage their partner, they can also use text-based words to incur similar feelings. Therefore, it can be stated that the words used via computer-mediated communication can be as “impactful” as the words used in face-to-face communication (Locher, 2010). Even though the words are the same and can produce the same feelings in senders and receivers, the users of CMC started to create their own language that was only understandable via email, text messaging, or instant messaging. Because of these developments in text-based language, people began to study and observe the changes, effects, and attitudes that occurred in computer-mediated communication (Locher, 2010).

One of the communication aspects observed is called media richness. When media is considered “rich”, it includes various features such as: instant feedback, multiple nonverbal cues, clear language, and personal focus. For the purpose of this study, research regarding media richness focused primarily on multiple nonverbal cues. While media including “physical presence, vocal inflection, body gestures, words, numbers, and graphic symbols” is considered rich, media that lacks the former aspects is considered lean (Sheer, 2011, p. 83). In order to explain this concept, the iphone can be compared to a regular flip phone not containing special capabilities. The iphone contains an application called Face Time, which allows the carrier to call and talk face-to-face with his or her friend by using the phone’s webcam. In contrast, a regular flip phone only allows its carrier to text message using the given keyboard. While various

beneficial applications like Face Time exist, many individuals still rely strictly on e-mail or text messaging, which is considered lean. In order to understand why a distinction needs to be made between “rich” and “lean” media several studies have been observed and discussed in the following sections.

CMC compared to FtF

Before looking at some of the studies, it is beneficial to observe how professionals compare computer-mediated communication to face-to-face communication (FtF). At one time, relationships were initiated, developed, and maintained through the usage of letters and face-to-face meetings. Now, those types of relationships can and have been taking place in online chat rooms, instant messaging, and text messaging with the use of cellular phones. In observing the relationship interaction online, Lea and Spears (2007) assert that relationships developed and maintained online transpire at a slower pace because of the deficiency of nonverbal cues. In order to strengthen their argument, they explained that it takes people longer to “acquire trust and to communicate intimacy than face-to-face relationships” (as cited in Wrench & Punyanunt-Carter, 2007, p. 356). Because CMC users lack nonverbal cues, receivers of a conversation must rely on the information that the sender chooses to disclose. In this way, Rice and Love (1987) proclaimed that CMC is impersonal compared to communication that would take place in face-to-face encounters. In fact, they believe that it is not even “suitable for negotiating or persuading others, as CMC contains limited audio and visual cues” (Wrench & Punyanunt-Carter, 2007, p. 357). In studies about CMC versus face-to-face communication, it was stated that CMC could only be strengthened with corresponding FtF communication (Rice & Love, 1987; Ramirez & Zhang, 2007; Wrench & Punyanunt-Carter, 2007; Burgoon, Stoner, Bonito & Dunbar, 2003).

Some believe that text based communication is not as rich or advantageous as face-to-face meetings; therefore, relationships cannot succeed as well unless face-to-face encounters are one of the methods used. These same individuals believe that FtF communication allows CMC users to see each other for who they truly are. In contrast to Rice and Love's argument that CMC is impersonal, Chenault stated that CMC could involve a lot of emotion that could potentially lead to lasting and meaningful relationships. Sometimes, relationships that begin or evolve using CMC could transfer to face-to-face or "real-life" (Chenault, 1998). Regardless of whether they transfer to face-to-face or not, various studies have shown that "FtF communication is not essential for establishing trust or mutuality and that mediated formats can be used successfully for group tasks or establishing interpersonal relationships. In fact, in many cases, CMC modalities are on a par with or even superior to FtF for these goals" (Burgoon, Stoner, Bonito & Dunbar, 2003, p. 10).

Because each form of CMC is different, it is difficult to state that all forms exhibit the traits previously mentioned. For instance, because CMC includes all forms of synchronous and asynchronous communication through a computer, it is only fair to consider the similarities and differences before grouping them together. Internet Relay Chat (IRC) refers to electronic interaction that takes place in real-time and is virtually synchronous around the world. (Wrench & Punyanunt-Carter, 2007). Because of this specific definition, Cornetto concluded that IRC is the "most highly interactive form of CMC" (as cited in Wrench, 2007, p. 358). Rintel and Pittam (1997) agreed after they observed the various similarities between IRC and FtF including the opening and closing of conversations. They explained that individuals using IRC need to develop alternate systems in which to open, maintain, and close conversations (p. 508). In order to do so,

these individuals need to construct creative and interactive alternatives that represent what they would say or do when communicating face-to-face.

Instant messaging (IM) and text messaging are probably the best examples of computer-mediated communication used for IRC. Because this form of computer-mediated communication is fairly inexpensive and incredibly convenient, instant and text messaging has rapidly gained popularity in America and several other countries (Bryant, Sanders-Jackson & Smallwood, 2006). While telephones were at one time the most popular form of communication between friends living long distances away, the cost of chatting for a given amount of time soon became too expensive in comparison to online chat and text messages. Whereas instant messaging allows individuals the capability of using their computer keyboards to quickly type messages to friends, text messages allow individuals to use their cell phones in order to type messages. While instant messages usually allow for quicker typing and longer messages, text messages allow individuals to send messages wherever they are as long as they have their cellular phones (Ling & Baron, 2007). While at one time, technological communication was used for more industrious purposes; it has now become a convenient and enjoyable way of communicating with family and friends. Even in 1992, the first text message demonstrated how people enjoyed computer-mediated communication for more than just work based conversations. Because Neil Papworth wanted the first text message to say more than, “Mr. Watson, come here”, he considered the time of year and typed “Merry Christmas” to his friend Richard Jarvis even though it was only December 3 (Shannon, 2007). Since that time, billions of text messages have been used daily for greetings, personal conversations, and work related queries. Regardless of the reasons, computer-mediated communication has increased the speed and convenience of interactions in all areas of life.

The workplace is a good atmosphere in which to compare computer-mediated communication and face-to-face communication because employees are constantly in need of talking to their coworkers about projects, meetings, or decision-making. While they might prefer face-to-face communication to discuss these types of matters, they realize that it is nearly impossible to be able to see that person or group of people and receive the needed information immediately. Therefore, individuals in the workplace have noticed the increased necessity of using computer-mediated communication in order to communicate more efficiently and in a timelier manner (Berry, 2006). In fact, universities such as Cornell University are offering courses to students that would help prepare them to properly use computer-mediated communication in the workplace. They are trained in not only the proper uses of e-mails, but they are also trained in proper uses of instant messaging (Newman, 2007). Businesses have not only started using e-mails and instant messaging, but they have also started using online communities or groups in which team members can discuss various projects or ideas without needing to meet in a common area at a time suitable for everybody. For these reasons, a lot of professionals prefer computer-mediated communication to face-to-face communication.

While many researchers have concluded that relationships are more successful when social presence occurs, empirical evidence has caused them to stop and consider the possibility that nonverbal cues received from face-to-face (FtF) contact is not the only way to maintain social presence (Ramirez & Zhang, 2007; Amichai-Hamburger & McKenna, 2006). Unfortunately, when FtF nonverbal cues are not observed, people have a better chance of using deception online in order to have the other person believe something that places them in a more positive light. CMC allows users to edit, revise, and reconsider text before sending the words through cyberspace. Therefore, it is commonly believed that people are able to more clearly send

and receive nonverbal cues through face-to-face communication than through computer-mediated communication. Fortunately, research on this topic reveals more than just what is commonly believed.

Another idea about the difference between computer-mediated communication and face-to-face communication is that they are, in fact, not different. Walther (1996) argues that there is no difference between the two regarding intimacy. He stated that CMC would work perfectly well if the people involved are interested and have the time to make it work (1996). He also declared that CMC was rarely ever impersonal. Parks and Floyd (1996) also stated that users of computer-based interactions rarely ever changed their online personalities to differ from their offline personas. Similarly, Postmes, Spears, and Lea (1998) explained that CMC can “liberate individuals from social influence, group pressure, and status and power differentials that characterize much face-to-face interaction” (p. 689). Therefore, people who are communicating online are able to be whom they really are without feeling embarrassed or intimidated. With the information given, these researchers concluded that online communication enables users to be as “vulnerable to persuasion, criticism, and attraction” as much as they are offline (Wrench & Punyanunt-Carter, 2007, p. 357).

Theories of CMC

The previous information about nonverbal cues is excellent for describing the “cues-filtered-out” perspective of CMC. This perspective argues that there are two types of media called rich media, which was previously mentioned, and lean media. Rich media is the type of media that includes a great deal of information, whereas lean media lacks “social cues such as nonverbal information and information related to the physical body, such as text-based interactions” (Cornetto & Nowak, 2006, p. 378). This perspective therefore argues that lean

media is not as valuable and “restricts user’s ability to present a clear picture of himself/herself, or to receive a true picture of an interaction partner” (Cornetto & Nowak, 2006, p. 378). Because of these restrictions, persons who believe in this perspective, view lean media as less satisfying. In contrast to that perspective, research has proven that individuals can accommodate the technological limitations by developing and using their own language in order to express themselves better.

Since technology-based communication has increased over the last few years, it has been important for researchers to conduct studies in order to learn more about human behaviors in cyberspace. Once these studies were complete, the men and women involved in the research developed and introduced various theories that supposedly predicted and explained the effects of electronic communication (Hrabe, 2005). The computer-mediated communication theory was one of the theories developed. Because it is such a broad theory and involves several different aspects, several more theories were developed in order to describe more specific phenomenon. These theories included concepts such as: social presence, lack of feedback, and the lack nonverbal cues. The first concept explained how humans using computer-mediated communication were unable to possess the interpersonal presence that they would have if they were face-to-face. Instead, these users would “experience a greater sense of isolation, communication stress related to the lack of feedback (nonverbal cues) from their interaction partner(s), frustration about the effort involved, and difficulty in establishing trust” (Hrabe, 2005, p. 405). In contrast, CMC can be compared to writing, in that letters were at one time the main method of long distance communication. A few differences between computer-mediated communication and letters include: brief comments as opposed to lengthy ones, casual language compared to formal language, unplanned compared to planned, and lastly, an Internet presence

as opposed to words written in the past (Hrabe, 2005). All of the previously mentioned traits and characteristics of CMC varies based on the situation or persons involved. For instance, two people who already know each other before engaging in a computer-mediated conversation will be more willing to have lengthy conversations about a topic in which they had already decided to discuss.

Individualized CMC

A large part of communication involves emotions and the nonverbal cues that portray those emotions. While many people believe that CMC “lacks nonverbal communication cues and prevents the conveyance of emotions and attitudes to receivers”, others believe that after a certain amount of time people who have become accustomed to a certain type of medium will learn how to use it properly and interact in the necessary fashion to enable clear communication (Lo, 2008, p. 595). For instance, a person interacting via computer-mediated communication can use certain types of emoticons to express his or her feelings instead of frowning, shrugging, or smiling. Because communication is comprised of verbal and nonverbal cues, it was difficult to view computer-mediated communication as communication because of its lack of nonverbal cues. Lo (2008) argued that while individuals using CMC cannot see nonverbal cues, emoticons can be used to express feelings and/or attitudes. This specific study described by Shao-Kang Lo (2008) focused on the usage of emoticons and whether they were successful in expressing emotions through cyberspace or not. In observing the usage of emoticons, it is important to note that as people work more with computer-mediated communication, they develop higher comfort levels and confidence in their conversations and therefore begin to create or design their own vocabulary that would properly represent their personality, attitude, or emotions. The results from this study showed that when people receive messages involving only text, they could not

properly perceive the emotional intent of the sender. However, when the same messages are sent with emoticons, the receiver perceives a message that more properly unites with the sender. Therefore, the results of this study proved how emoticons could be used in place of nonverbal cues in computer-mediated communication (Lo, 2008).

While emoticons are a valuable way of representing emotions, they do not symbolize the same thing for each individual. Even though the message sender might wish to convey a specific thought by using a certain emoticon, the receiver might perceive that emoticon differently and therefore receive an entirely different message altogether. Because every individual is unique, he or she will create their own textual symbols that represent certain nonverbal cues. Some examples of these symbols include: capitalizing letters to represent shouting, emoticons to represent facial expressions and/or emotions (☺☺☺), elongated words (sooooooo much) to emphasize certain words or strong emotions, acronyms (LOL – laughing out loud), and words enveloped by asterisks (*sigh*) to represent a feeling or action. In some situations, people will highlight and color the text red to indicate swearing (Ledbetter & Larson, 2008; Cho & Hung, 2011; Turnage, 2007; Poblet & Casanovas, 2007). Rezabek and Cochenour (1998) have suggested, “the use of emoticons may be a persistent characteristic of given individuals” (p. 214). While some people might use emoticons frequently, others might simply use words to express their emotions.

Further research, suggests that gender also determines the language and emotional differences of the sender and receiver. In a study by Andrew Ledbetter and Kiley Larson, they stated that the gender of the sender and receiver greatly influences the nonverbal cues sent and the perception that they cause in the receiver (Ledbetter & Larson, 2008). In offline communication, females tend to be more emotionally expressive than males; therefore, even with

limited research it has become evident that females will also express their emotions more frequently in online communication. From this information, the hypothesis can be made that females tend to use more emotional nonverbal cues than males. Because the gender of the sender determines nonverbal cues given, it can also be stated that the perception of the nonverbal cues can vary based on the gender as well. In contrast to that belief, limited research has suggested that males will use more nonverbal cues, such as emoticons, when conversing with females (Herring, 2000).

Gender differences are not limited to amounts of emotions displayed, though. According to some studies, behaviors related to gender are likely to become evident even through text-based conversations. It is believed by some that the different gender have specific “markers” that proclaim them for who they are. This suggests that gender stereotypes have been widely given and accepted as the norm or the way people should be. Examples of these markers include a person’s speaking style or the topic in which he or she decides to discuss. Interaction traits and personality can also be a part of the characteristics that determine whether the speaker is male or female. Some of these characteristics for males include: “dominating conversations, interrupting others, and/or using a more adversarial style.” Some of the characteristics produced by females include: “passive language, discussing thoughts or feelings, and/or using “emoticons.” Regardless of how genders reveal their gender, it is still difficult to guess the gender of an online partner, unless some of the “nonverbal cues” are used (Cornetto & Nowak, 2006, p. 380).

After conducting research on their theories, Ledbetter and Larson concluded that emoticons were not used or even necessary when the subject matter of the text was valuable enough without emotions revealed. Based on this result, questions were raised as to why emoticons were still used in text-based messages. An assumption developed from these results

which suggested that adding emoticons or nonverbal cues in text-based messages were humans' way of making computer-mediated communication more real and similar to face-to-face conversations. In addition to that hypothesis, it was stated that nonverbal cues may or may not influence the receiver. Not only does more research need to be conducted about the influence of nonverbal cues, but also more investigation needs to take place in the area of intent, interpretation, and perception of the sender and receiver (Ledbetter & Larson, 2008).

Individualized CMC and Perception

As stated previously, people have assumed that computer-mediated communication has several shortcomings, which could lead to misperceptions or miscommunication. In order to overcome these problems, people have used textual symbols to express their emotions. Gunawardena and Zittle (1997) stated that their research revealed how people feel closer to one another when these types of online nonverbal cues are used. Some of the most popular cues used were multiple periods, smiley faces, multiple dashes, and hyphens that changed basic sentence structure. Because of these online alterations to the English language, CMC users are changing basic grammar and language rules that people have learned from childhood (Crystal, 2001). The individuals involved in changing the English language have not done so on purpose; instead, they have simply attempted to express their emotions, convey feelings of belonging, or influence the perception of their partner (Henri & Pudelko, 2003). Another popular reason participants in a particular study used nonverbal cues was so that the person receiving the message would not misunderstand what they were trying to say (Bollinger, 2009). Therefore, it can be concluded that visual and/or textual cues that are used as nonverbal cues are important in contributing to "clear expression of meaning and emotions" (Bollinger, 2009, p. 106). In comparison to that theory, Graham and Ickes (1997) proclaimed that nonverbal cues could provide information that

would allow a person to understand another's emotional state, yet they are unsuccessful in allowing appropriate interpretation of specific thoughts or feelings.

Even after considering the usage of nonverbal cues online, messages are still misunderstood. Because each individual is different, some receivers will be apprehensive to correctly interpret the message sent by some senders. This is referred to as the "second-guessing theory" that suggests that the receiver will evaluate the message based on his or her feelings of the sender. When people use this method, misperceptions will most likely occur which eventually will cause conflict (Turnage, 2007).

These studies have indicated that, because each individual is different, he or she would describe, explain, and use various types of wording or language to communicate their thoughts, emotions, or feelings. Likewise, because each individual is unique, he or she will also perceive messages differently. S.E. Snodgrass and her colleagues researched the procedure called "interpersonal sensitivity" (Boucher, 2008, p. 239). The purpose of their study was to discover how the gender and status effected conversations in face-to-face communication and computer-mediated communication. Their results revealed that people who were of different genders did not perceive conversations much differently than the other, but status differences did change the perception of the conversation and/or the feelings of their partner. For example, a politician would perceive something a great deal differently than a person unrelated to the political arena.

Not only does the individual's language or manner make a difference in computer-mediated communication, but so does the individual's competence in the computer field. When a person is more comfortable sitting in front of a computer or pulling out a phone to text, he or she will be more willing to express their thoughts and feelings in a more personalized way. These types of people will also develop healthier CMC relationships. Spitzberg (2006) believed that in

order for people to obtain this competence, they must first be motivated to learn, possess computer knowledge, and learn the techniques, rules, and roles. In addition to that list, Spitzberg (2006) believed that a “competent CMC user” would show interests and/or concern for his or her partner, engage the other person actively, control the time and relevance of the conversations, display expressiveness of emotions, and portray confidence and comfort in computer-mediated conversation. A study completed by Wrench in 2004 revealed “a positive relationship between CMC competence and perceptions of both online-friendship intimacy and online-communication satisfaction” (Wrench, 2007, p. 359). In conclusion, competence in computer-mediated communication is important for those who endeavor to initiate, develop, or maintain relationships via computer mediums.

Relationships and Conflict

Computer-mediated communication is popular for more than simple communication of facts and information. It has become the place where people have been able to develop, maintain, and terminate important relationships. Not only are Americans spending millions of dollars on personal ads, but they are also spending more time communicating with significant others or potential significant others through websites such as match.com, eHarmony, and zoosk (Starks, 2007). These types of dating websites request that participants enter information into their personal profile allowing for better matches. Once these matches have been made, the individuals will then be able to communicate via computer-mediated communication. Meeting potential life partners is not the only reason for computer-mediated communication, though. The majority of individuals using the Internet, use it for social interaction and relationship building (Cummings, Butler, Kraut, 2002).

Just like individuals need to spend time in each other's presence to get to know one another better, they also must spend more time talking to one another online if that is their medium of choice (Kumi, 2010). With this in mind, the more time spent in each other's presence increases the degree of personal closeness one feels and therefore allows the individuals more comfort and freedom to discuss certain issues and involve themselves in different types of conversation. Similar to face-to-face conversations, these conversations include good and bad (Amichai-Hamburger & McKenna, 2006; Turnage, 2007). In fact, some people prefer text messaging or instant messaging as the medium in which they manage conflict so that they would not have to confront one another via direct interaction (Fulks, n.d.). While online interaction was at one time considered the "cursed" tool that created conflict, recent evidence has shown that lower anxiety levels exist with individuals who interact using CMC rather than using FtF (Amichai-Hamburger & McKenna, 2006; Turnage, 2007). Therefore, the argument may not take place immediately, rather it would take place later allowing for moments in which one or both parties can calm down before responding (Cho & Hung, 2011). Likewise, CMC is the best form of medium for an individual to say "no" and/or reject ideas, invitations, or insults because the individuals would not need to see the other's expressions.

Once an individual is more comfortable with a certain technology such as telephones, e-mail, and text messaging, it is possible and even likely that he or she would begin using it for more than simple chitchat. More specifically, when a person encounters a situation dealing with conflict, he or she might choose e-mail, text messaging, or instant messaging as the method for discussion. Studies were conducted in order to discover whether people chose e-mail as a medium for discussion and conflict resolution. From the beginning, researchers considered the social presence theory as a factor that would possibly affect their results. They believed that the

closer individuals felt to one another, the more comfortable they would be in discussing conflict. In other words, they believed that because face-to-face conversations allowed for the closest degree of social presence, people might automatically choose to communicate in that manner (Shapiro & Allen, 2001). In contrast, results from a study showed that “43% of instant messaging users said they had used Internet-based instant messaging to deliver a personal message/information that they would not say to someone in person” (as cited in Cho & Hung, 2011, p. 251). Recent examples of this include instances in which an individual “breaks up” with his or her significant other via computer-mediated communication because it would be difficult face-to-face. In fact, some individuals find “breaking up” through e-mail or text messaging safer, easier, and more convenient than face-to-face (Fulks, n.d.). Using computer-based communication allows individuals to engage in conversations from the comfort and privacy of their own homes causing them to be less anxious and nervous about stating what they want or how they feel (Amichai-Hamburger & McKenna, 2006).

Not only are individuals able to avoid personal face-to-face conflict by using computer-mediated communication, but they are also able to avoid professional face-to-face conflict as well. Research has revealed that many individuals prefer to avoid group meeting with coworkers face-to-face because people will tend to use “social, political and power cues” or talk more than necessary (Berry, 2006, p. 354). Online discussion boards or communities cut out the unnecessary talking and/or dominance allowing coworkers to discuss only what is needed. Conversely, some professional employees are nervous about discussing work related issues online because their words would be in print and easily accessible by others. Therefore, many workers felt compelled to guard themselves from saying anything controversial that could be passed onto somebody else (Washer, 2002).

Kiesler and Sproull (1986) argued that because CMC reduces the amounts of nonverbal cues and social presence, individuals would more likely react by using more uninhibited behaviors such as increased language or inappropriate acting out. Several scholars proclaimed “that the depersonalization of the other and the lack of social cues such as facial expressions, tone of voice, gestures, and other cues found in face-to-face communication create misunderstandings between communicators” (as cited in Turnage, 2007, p. 46). For the given reasons, these men and women regard CMC as a riskier form of communication that could lead to harmful results. Spears and Lea (1992) mentioned the reduced cues theory and stated that any behaviors or attitudes that result from computer-mediated communication is the result of the “lack of social cues, the difficulties of co-ordination and feedback, deindividuation, depersonalization and/or attentional focus, and conformity to a computing subculture norm”. More recent studies confirmed, “successful conflict management has a positive effect on interpersonal relationships, including satisfaction with same-sex friendships, romantic relationships, and marital relationships” (as cited in Kumi, 2010, p. 365).

The problem with stating that conflict management is useless in CMC because of the lack of nonverbal cues is that it assumes the medium itself is responsible for various outcomes. The SIDE model offers an alternate consideration about the characteristics or attributes of the user’s identities. These aspects are personal or unique identity and social identity. Spears and Lea (1992) stated that either one of these attributes would become important based on the conversation and would change the effects of behaviors of the users involved. Because of these characteristics and the fact that technology is becoming a more important part of the culture, people are beginning to use e-mails more often in cases where they wish to avoid interaction or handle conflict face-to-face. Similarly, Katany, Wotring, and Forrest (1996) stated that people

would also choose computer-mediated communication to interact with people in order to “strategically position themselves relationally with respect to the communication partner” (p. 417). By doing this, they are able to handle certain tasks or goals more efficiently. Yet other researchers also suggest that by using CMC for interaction involving conflict, users are able to optimize self-presentation. Therefore, they are able to determine the amount of interpersonal effects and control what is said and how much is stated (Walther & Burgoon, 1992).

Results from a study showed that people chose e-mail for various reasons including: desire for expressing emotions immediately, issues with finding time to meet with the other person, and differences of conflict management. Time is also another important rationale for some users who chose CMC over face-to-face communication. This allows users to choose when and where they send and receive message enabling them to pace the interaction in the way they would prefer. Lastly, participants stated that they appreciated the opportunity to look over their messages before sending them. While in face-to-face conversations, a person might realize what he or she said after the fact, computer-mediated communication allows users to read and edit their conversation first (Shapiro & Allen, 2001). In contrast, others believe that people might tend to “shoot from the hip” and send off an e-mail or message before they consider it (Turnage, 2007). From this study sixty-seven percent of the participants stated that the lack of facial expressions was a benefit to using e-mail when handling conflict, while sixty-three percent stated that it was beneficial so that they could avoid seeing the person FtF. Other studies also revealed that once some people are comfortable with CMC, they are more involved and have greater mutuality and trust in that medium than those who use face-to-face conversations (Burgoon, Stoner, Bonito & Dunbar, 2003).

Research Focus

While researchers disagree about certain aspects of computer-mediated communication, such as individualized communication, perception, and conflict, they have made a few things clear for the sake of this study. First, computer-mediated communication lacks the nonverbal cues that are necessary in everyday communication. In order to compensate for their loss, users of CMC will use various words, emoticons, or unique language to express their emotions, feelings, or facial expressions. Secondly, because each individual is unique, he or she will develop their own language that can be used to interact with others. Similarly, because each individual creates his own way of communicating, it is often difficult and confusing for others to understand their language or specific jargon. In light of that, CMC users will probably misinterpret the message received and perceive a different message altogether. Therefore, because the misperception is more likely in computer-mediated communication, it is probable that conflict will occur more often than in face-to-face communication.

Hypotheses

Because past research has revealed a common dissatisfaction toward computer-mediated communication regarding the lack of nonverbal cues, it is logical to assume that these types of messages could cause confusion in the participants involved. If, in fact, these types of messages do cause confusion, they will also most likely inflict certain emotions into the readers that would cause conflict between the conversational partners. Since previous research has shown how females tend to be more emotionally expressive than males, it is logical to assume that they would prefer using more nonverbal cues in face-to-face communication as well as computer-mediated communication. In contrast, if these same females are involved in conversations that lack nonverbal cues, they would most likely become more confused because certain aspects of

emotional expression are missing, which drastically changes certain conversations. Therefore, the study's three hypotheses can be stated.

H1: Females tend to use more nonverbal cues than males when interacting in computer-mediated communication.

H2: Females tend to perceive confusion at a higher rate than males when using lean media during computer-mediate communication.

H3: Females tend to perceive conflict at a higher rate than males when using lean media during computer-mediated communication.

Chapter 3

Methodology

Because the computer-mediated communication theory is considered “the process by which people create, exchange, and perceive information using networked telecommunications systems that facilitate encoding, transmitting, and decoding messages”, it was important to question and analyze participants’ exchanges and perceptions of messages to determine the accuracy of the above hypotheses (Romiszowski & Mason, 1997, p 398). In order to prove or disprove the above hypotheses, it was necessary to formulate a plan or method of research.

Research Design

Supporters of quantitative research have stated that research should be observed objectively by removing personal bias, opinion, and/or emotions. In order to do this, survey asked only closed questions and reported them statistically instead of analyzing and interpreting participants’ answers (Johnson & Onwuegbuzie, 2004). Quantitative researchers are therefore able to distribute questionnaires and plug the results into a graph, which impartially tabulates results. While qualitative researchers must be willing to notice the change that takes place throughout the research and change their approach when necessary, the quantitative researcher must abide by the precise answers given by the participants. Lastly, while qualitative research is based on observation and interpretation, quantitative research is based on specific answers and statistics (Creswell, 2009).

Survey Design

In order to prove the study’s hypotheses, a survey involving both dichotomous and multiple choice questions was created and posted on www.kwiksurveys.com. The questions were posted online because it offered several advantages. After the survey was created and posted, the

link was e-mailed to several communications classes in a liberal arts, mid-Atlantic private university. The link was also posted on Facebook. This approach had several advantages, which included: flexibility, speed, convenience, question diversity, low cost, and easy follow-up (Evans & Mathur, 2005). In order cover all aspects of the three different hypotheses, the survey questions were divided into three different sections. Those three sections included basic demographics, perceptions of messages, and experiences with conflict using computer-mediated communication.

The first section involved questions about the messages themselves. In order to answer these questions, the participants were encouraged in the instructions to use personal text messages as a basis for their answers. For instance, the participants were asked about their use of acronyms (LOL), elongated words (Sooooo), and emoticons (☺ ☺). After asking the participants about their personal use, they were then asked about messages they had received from same gender conversational partners and opposite gender conversational partners.

The second of questions focused on messages or conversations involving conflict. First, the participants were required to answer whether or not they have been confused by computer-mediated messages or whether they have dealt with conflict using computer-mediated communication. If they answered no, they would then be unable to answer the next set of questions. If they answered positively, he or she could then proceed to answer the rest of the questions in that section. The following questions asked the participants about the reasons for their confusion and/or conflict. These questions allowed the participants to circle as many answers that applied to their personal experiences. Finally, the participants were asked how often they dealt with conflict via computer-mediated communication and with what gender they usually had that conflict.

The third and last section of questions, basic demographics, asked questions about the participants gender, age, racial/ethnic identity, amount of time using computer-mediated communication, and years of experience. By asking questions such as these, the researcher was able to observe specific questions regarding participants' gender as well as determining how comfortable the participant was with computer-mediated communication. These questions not only benefited the research, but it also resulted in further observation and information about age, racial/ethnic identity, and experience with computer-mediated communication.

In order to more clearly describe the questions and their classification, they have been organized and placed in a table.

Table 1. Variables in the Quantitative Analysis

Factor	Variables	Survey Questions
Perception of Messages	Messages involving only text Messages with emoticons Messages involving other nonverbal cues Frequency of nonverbal cues used by same gender and opposite gender conversational partners	Q 1-6
Experiences with Conflict while Using CMC	Experience with confusion and conflict in CMC Reasons for confusion and conflict Frequency of confusion and conflict received through CMC Gender of conversational partner when dealing with confusion or conflict in CMC	Q 7-14
Basic Demographics	Gender/Age Racial/Ethnic identity Amount of usage per day Years of experience	Q 15-19

Target Population and Sample

The participants involved in this research included university students, graduate students, and adults of any age who use computer-mediated communication. By using email, the survey

link and research information was sent to communication students registered in basic communications in a mid-Atlantic, liberal arts private university. By using a social networking site (Facebook), the survey and research information was posted allowing anybody taking the survey to also post the link onto his or her wall. Also, the survey was distributed to students attending basic communications classes. The criteria for selecting the participants included: (1) voluntary involvement, (2) signatures of the informed consent form, (3) and finally, meeting the age requirement of eighteen years or older.

Using quantitative collection strategies, the researcher asked participants to voluntarily complete the survey. The first method of sampling used was convenience sampling, which is the type of sampling taken from data that is most convenient for the researcher (Merrigan & Huston, 2009). In this case, the survey was distributed by graduate students working in the Communications Department to undergraduate communication students registered in basic communication. They were offered extra credit if they voluntarily took the survey. These classes mainly consisted of freshmen and sophomore college students. Each class was comprised of approximately 25 students who had the capability of taking the survey. During one spring semester, the researcher was able to ask six classes of this size to participate.

The second method used was the network or snowball sampling, which is the type of sampling that requires participants to first complete the survey then “solicit” others to take it in order to benefit the research (Merrigan & Huston, 2009). A good example of this would be postings on Facebook. When an individual posts a link onto their wall, another individual who sees the link and likes it can then repost or share the link on their wall. Likewise, when an individual receives a survey link through e-mail or social networking, they can then share the same link with their friends using the same method. This allows researchers a better opportunity

to recruit as many volunteers as possible. Because it was impossible to see or talk to each participant involved, the survey was created on the website www.kwiksurveys.com so that the participants could take the survey at their own convenience. The survey link was posted on Facebook in order for friends and acquaintances to see the link and have the opportunity to take the survey if they qualified. Also, the researcher emailed graduate coworkers with an explanation of her thesis, a request for involvement, and the survey link. The researcher then asked participants to forward the link to others who may be interested in taking the survey.

While three hundred twenty four individuals started the survey, only three hundred answered every question. Several of the individuals quit the survey after question two because they failed to meet the proper age requirement. Other participants completed about half of the survey then exited the website without completing the questions.

Data Collection

Using similar types of surveys models, a specific survey focusing on these hypotheses was developed. The survey for this study was distributed online via the website www.kwiksurveys.com. At the beginning of the survey, an informed consent form was provided with an explanation for the reasoning of the survey. The privacy of the participants was also included in the informed consent form. As soon as they clicked on the “agree and accept” button, the survey opened. The type of questions included dichotomous questions, multiple choice, and checking all answers that apply to the participant. The survey consisted of eighteen questions, which were organized into three different sections. The three sections included: basic demographics, message perception, and experience in dealing with conflict using computer-mediated communication.

The first section included questions about messages that can be sent via text messaging or instant-messaging. The participants were asked about the frequency in which they used lean text, acronyms, elongated words, and emoticons. They were also asked about the response messages received from same gender and opposite gender conversational partners. The second section was comprised of questions about the participants' confusion and conflict they have experienced when communicating via computer-mediated communication. The third and final section included demographics questions that inquired about the participants' gender, age, racial/ethnic identity, amount of time using computer-mediated communication, and years of experience using computer-mediated communication. All of these questions were answered with multiple-choice answers.

Data Analysis

After receiving the participants' surveys, each question was organized and placed in the appropriate category. The first three categories corresponded with each of the three hypotheses, while the fourth category included further information that was insightful for not only this study but future research as well. Demographic questions were placed in the fifth and last category.

The first category focused on the first hypothesis that stated that women tend to use more nonverbal cues than males when interacting through CMC. Five questions were analyzed in this section. These questions include: (1) How often do you use messages containing acronyms (LOL)? (2) How often do you use elongated words (soooo)? (3) How often do you use emoticons (☺☺)? (4) How often have you received acronyms, elongated words, or emoticons from the same gender? (5) How often have you received acronyms, elongated words, or emoticons from the opposite gender?

The second category focused on the second hypothesis that stated that females tend to perceive confusion at a higher rate than males when using lean media during computer-mediated communication. Three questions were analyzed in this section. These questions include: (1) Have you ever been confused when receiving a message via computer-mediated communication (text messages, e-mail, instant messages, etc.)? (2) How often have you dealt with confusion via computer-mediated communication (text messages, e-mails, instant messages, etc.)? (3) With what gender do you usually have confusion via computer-mediated communication (text messages, e-mails, instant messages, etc.)?

The third category focused on the third hypothesis that stated that females tend to perceive conflict at a higher rate than males when using lean media during computer-mediated communication. Three questions were analyzed in this section. These questions include: (1) Have you dealt with conflict while using computer-mediated communication (text messages, e-mails, instant messages, etc.)? (2) How often have you dealt with conflict via computer-mediated communication (text messages, e-mails, instant messages, etc.)? (3) With what gender do you usually have conflict via computer-mediated communication (text messages, e-mails, instant messages, etc.)?

The results of the three sections were exported to SPSS and analyzed for the statistical significance, which is reported in the results section and described in the discussion section. More specifically, it showed the significance of certain questions regarding gender differences. The significant level was determined by 5% or less. The fourth and fifth sections were not studied through statistical analysis like the first three sections, but were reported and analyzed for assumptions and suggestions for future research.

Conclusion

While these methods may not discard of all types of limitations, prejudice, or clarity, they did improve the validity and reliability of the research. Because this study was limited to only quantitative research, more research could probably be added that would assist in further comprehension of this topic. Because computer-mediated communication continues to increase in popularity and versatility, more questions and hypotheses will develop leading to even more research in the future. For now, this research will explain and provide more information about lean media, gender perception, and conflict within computer-mediated communication.

Chapter 4

Results

As previously stated, this study focused on several aspects of interpersonal interaction that takes place in computer-mediated communication. More specifically, it researched how different genders influenced the verbal and nonverbal in the content of a computer-mediated message. It also explored how lean media affected confusion and conflict in CMC and how gender affects that confusion and conflict. In order to discover more about these different categories, several concepts were hypothesized then put to the test by online surveys. After the survey had been open to volunteers for two weeks, it was closed for proper analysis and report of the results. While three hundred twenty four participants started the survey, only three hundred completely finished the survey. Of the three hundred participants, one hundred twenty three (41%) were male and one hundred seventy seven (59%) were female. Because the large majority of surveys was taken by college-aged students, two hundred thirty six (78.67%) of the participants were between the ages of eighteen and twenty one (18-21). Thirty-six (12%) of the participants were between the ages of twenty-two and twenty-five (22-25), fourteen (4.67%) were between the ages of twenty-six and thirty (26-30), eight (2.67%) were between the ages of thirty-one and forty (31-40), one (.33%) was between the ages of forty-one and fifty (41-50), four (1.33%) were between the ages of fifty-one and sixty (51-60), and one (.33%) was either sixty-one or older (61 or over). Because the majority of the students attended a Mid-Atlantic, liberal arts private university, the racial/ethnic identity favored the white/Caucasian identity, which was two hundred seventeen (72.33%) of the participants. The second most popular ethnicity was black/African American, which equaled thirty-three (11%) of the total participants. The rest of the participants were fairly distributed among the rest of the racial/ethnic identities.

In order to understand the amount of experience the participants had, they were asked the length of time in which they had communicated via computer-mediated communication and how often (times per day) they communicated via computer-mediated communication. Out of three hundred participants, one hundred eighty six (62%) stated that they communicated via computer-mediated communication six or more years. Only four (1.33%) of the participants stated that they had communicated via computer-mediated communication one year or less. The rest of the participants had between two to five years experience. When asked how many times per day they communicated via computer-mediated communication, one hundred twelve (37.33%) stated that they used CMC between twenty-one and thirty (21-30) times per day. Seventy-two (24%) participants stated that they communicated via CMC between eleven and twenty (11-20) times per day. While fifty-nine (19.67%) claimed that used CMC more than thirty times a day, only one (.33%) of the participants claimed to never used CMC throughout the day. With the basic demographics and questions about computer-mediated communication usage, it is important to look at each hypothesis in detail in order to nullify or prove each.

When considering the usage of computer-mediated communication, a person would probably think about not only the message itself but also the acronyms, elongated words, and/or emoticons. Although many people like to interact through computer-mediated communication by simply typing the words, many others enjoy adding nonverbal cues to their messages. In fact, some individuals may even find it difficult to send a message without nonverbal cues to express their feelings. The participants were asked if they had ever been confused during computer-mediated communication and, if so, how often. While sixteen (5.28%) of the participants claimed that they had never been confused when receiving a message via computer-mediated communication, two hundred eighty seven (94.72%) of the participants declared that they have

been confused by a computer-mediated message before. When asked how often they dealt with confusion via CMC, two hundred thirty one (76.24%) individuals stated that they occasionally/sometimes were confused, causing the rest of the individuals to be divided among the other answers. It is interesting to note that mistyped messages, the “tone” of text, blunt replies, and absence of punctuation accounted for the most popular reasons for confusion in CMC messages. Out of the eleven answering that they were confused “most of the time”, eight (72%) claimed that they used only text “most of the time” when writing messages. In contrast, only four of ten (40%) who answered that they were “never” confused stated that they used only text “most of the time” when writing messages. The individuals who asserted that they were confused most of the time circled a variety of reasons for their confusion, but the most popular reasons were the “tone” of text, mistyped messages, and text only messages. The rest of the reasons were somewhat equally distributed. The next group analyzed was the group who had stated that they were confused frequently/often when communicating via CMC. When this group of individuals had been asked about their reason for confusion, they too circled a variety of answers but seemed to have problems with more than just a few areas of communication. These individuals stated that mistyped messages and the “tone” of the text caused the most problems but were not much more controversial than messages that were blunt, lacked emoticons, or lacked punctuation. Therefore, the individuals who experienced confusion “most of the time” or “frequently/often” through computer-mediated communication experienced it because of mistyped messages, the “tone” of text, messages containing only text, messages lacking emoticons, blunt replies, and finally messages lacking punctuation.

While confusion does not always cause conflict, it can indeed impact how a message is perceived and thus how it is understood. If mistyped messages, blunt replies, and/or messages

containing only text cause confusion in computer-mediated communication, they also might influence a communicator's anger and therefore inflict his or her desire to argue. The participants were given similar questions about conflict that they had previously answered about confusion. These questions included whether they had ever been involved in conflict through computer-mediated communication and if so, how often. One of the major aspects of this section was focused on the reasons for these conflicting conversations. The results revealed that two hundred sixty seven (88.12%) of the respondents had dealt with conflict while communicating via CMC. When asked how often, ten (3.30%) stated that they experienced conflict most of the time in contrast to the twenty-two (7.26%) who claimed that they never dealt with conflict through computer-mediated communication. While two hundred thirty (75.91%) of the individuals were only occasionally involved in conflict, only thirty-three (10.89%) answered that they dealt with conflict frequently/often during CMC conversations. When questioned about the reasons, they circled "tone" of text and blunt replies the most. These popular reasons were closely followed by mistyped messages, absence of punctuations, lack of emoticons, and text only messages respectfully. Out of the ten answering that they dealt with conflict "most of the time", five (50%) stated that they used only text "most of the time". In contrast, only nine of the twenty-two (41%) who answered that they "never" dealt with conflict claimed that they used only text "most of the time". The participants who asserted that they dealt with conflict "most of the time" were then more closely examined. The results showed that these individuals dealt with conflict in computer-mediated communication mainly because of the "tone" of text, blunt replies, added punctuation, lack of emoticons, and mistyped messages. The rest of the reasons were fairly distributed among the other responses. In comparison, the individuals expressing that they dealt with conflict "frequently/often" listed "tone" of text and blunt replies for the most common

reasons for their problems. The reasons that closely followed were lack of emoticons, absence of punctuation, and capitalization. Again, the rest of the responses were evenly distributed among the rest of the choices. Therefore, the individuals who dealt with conflict “most of the time” or “frequently/often” through computer-mediated communication experienced it because of the “tone” of text, blunt replies, lack of emoticons, and finally, either the addition of absence of punctuation.

Hypothesis 1

By reviewing past research, it is evident that gender is a major influencer in the language and expression of individuals in not only face-to-face conversations but also in computer-mediated conversations. While male communicators tend to state what they think or believe without needing to use nonverbal cues or added expressions, female communicators seem to strive on the ability to express themselves in not only their gestures and facial expressions but also their verbal expressions. Therefore, if females tend to use more expression and nonverbal cues on a day-to-day basis in face-to-face interaction, it can be assumed that they also use more in computer-mediated communication as well. Thus, the first hypothesis is stated:

H1: Females tend to use more nonverbal cues than males when interacting in computer-mediated communication.

One hundred seventy seven females responded to the survey while one hundred twenty three males responded. In order to compare the two genders and determine the accuracy of this hypothesis, both genders were asked how often they used text only messages, acronyms, elongated words, and emoticons when writing and sending CMC messages. Fifty-four (43.90%) of the males stated that they used messages containing only text “most of the time” and only one (.81%) of the males claimed that they never used text only messages. In contrast, ninety-four

(53.11%) of the females stated they used messages containing only text “most of the time” and only two (1.13%) claimed that they never used text only messages. However, there was a larger percentage of males stating that they used text only messages frequently/often. Fifty-six (45.53%) of the males asserted that they used text only messages “frequently/often” while only sixty-four (36.16%) out of one hundred seventy seven females answered “frequently/often”. In order to observe computer-mediated messages in more detail, each participant was not only asked about different types of nonverbal cues that they might use when messaging. When asked about acronyms, seventeen (13.82%) male participants declared that they never used them while twelve (9.76%) stated that they used them most of the time. In contrast, fifteen (8.47%) of the female participants stated that they never used them while thirty-two (18.08%) proclaimed that they used them most of the time. Whereas thirty-six (29.27%) male respondents answered “frequently/often”, sixty-two (35.03%) female respondents answered the same. When the participants were asked about their usage of elongated words, only five (4.07%) males stated that they used them most of them time while twenty-nine (23.58%) answered never. Thirty-six (20.34%) females, on the other hand said that they used elongated words most of the time while nine (5.08%) answered never. While twenty (16.26%) of the males claimed that they used elongated words frequently/often, forty-one (23.16%) females answered the same. Therefore, the majority of both genders stated that they only occasionally or sometimes used elongated words. The last type of nonverbal cues the participants were asked about was emoticons. Nine (7.32%) of the male participants stated most of the time and seventeen (13.82%) answered never; however, the rest of them were evenly divided between occasionally/sometimes and frequently/often. In contrast, only nine (5.08%) of the female participants stated that they never used emoticons while fifty-four (30.51%) used them most of the time. While the males divided

their answers between occasionally/sometimes and frequently/often, the sixty-nine (38.98%) females favored frequently/often and only forty-five (25.42%) chose occasionally/sometimes.

After the results of each question were given numerical data and run through SPSS, they were analyzed for significance levels. An Independent Sample t-test indicated significance ($p = .008$) for the frequency question, "How often do you use acronyms?" When comparing the means, men had an average of 2.35 (occasionally moving toward never use acronyms) while women had an average of 2.62 (occasionally with a tendency to move toward frequently use acronyms). The question answers ranged from 1.0 = never to 4.0 = most of the time. The results indicate that both genders use acronyms "occasionally/sometimes" while texting, but women tend to use them more than men.

Likewise, the Independent Sample t-test indicated significance ($p = .000$) for the frequency question, "How often do you use elongated words?" When comparing the means, men had an average of 2.01 (occasionally moving toward never use elongated words) while women had an average of 2.59 (occasionally with a tendency to move toward frequently use elongated words). The question answers ranged from 1.0 = never to 4.0 = most of the time. The results indicate that both genders use acronyms "occasionally/sometimes" while texting, but women tend to use them more than men.

Another Independent Sample t-test indicated significance ($p = .000$) for the frequency question, "How often do you use emoticons?" When comparing the means, men had an average of 2.42 (occasionally moving toward never use emoticons) while women had an average of 2.95 (occasionally with a tendency to move toward frequently use emoticons). The question answers ranged from 1.0 = never to 4.0 = most of the time. The results indicate that both genders use emoticons "occasionally/sometimes" while texting, but women tend to use them more than men.

After each participant was asked about their own actions regarding nonverbal cues, they were then asked about the people with whom they communicate. They were asked how often they received acronyms, elongated words, and/or emoticons from the same gender and from the opposite gender. When asked about same gender, only three (2.44%) of the male respondents stated that they received such nonverbal cues from other males; however, twelve (9.76%) men claimed that they never received such nonverbal cues from the same gender. The largest majority of male participants, eighty-five (69.11%), answered occasionally/sometimes when asked about receiving such cues from the same gender. In contrast to their previous answers, thirty-seven (30.08%) of male recipients said they received nonverbal cues from females most of the time, whereas only four (3.25%) stated that they never used them. The majority of the men, sixty-three (51.22%) of the men claimed that they received nonverbal cues frequently/often from females.

When the female respondents were asked how often the opposite gender used acronyms, elongated words, or emoticons when messaging them, fifty-one (28.81%) stated that they received them most of the time while only three (1.69%) said they never received them from other females. Seventy-six (42.94%) of the females answered frequently/often and forty-seven (26.55%) answered occasionally/sometimes. Whereas about 72% of the women stated that they received nonverbal cues from other women frequently to most of the time, only 21% of the men received the same type of messages from other men frequently to most of the time. Likewise, while 28% of women stated that they never to occasionally received those type of messages from women, almost 79% of the men answered the same way for their messages from men. When the women were questioned about messages received from opposite gender, twenty-four (13.56%) stated that they received nonverbal cues most of the time and twelve (6.78%) said that they never received such cues from men. While eighty (45.20%) of the women claimed they only

occasionally/sometimes received such feedback from men, only sixty-one (34.46%) responded with frequently/often.

The next set of questions focused on the nonverbal cues the participants received from conversational partners. An Independent Sample t-test indicated significance ($p = .000$) for the first gender related frequency question, “How often have you received acronyms, elongated words, or emoticons from the same gender?” When comparing the means, men had an average of 2.14 (occasionally moving toward never receive nonverbal cues from same gender) while women had an average of 2.99 (occasionally with a strong tendency to move toward most of the time receive nonverbal cues from the same gender). The question answers ranged from 1.0 = never to 4.0 = most of the time. The results indicate that both genders use acronyms “occasionally/sometimes” while texting, but women tend to use them more than men. The results indicate that both genders receive nonverbal cues from the same gender “occasionally/sometimes” while texting, but women tend to receive them more than men.

An Independent Sample t-test indicated significance ($p = .000$) for the first gender related frequency question, “How often have you received acronyms, elongated words, or emoticons from the opposite gender?” When comparing the means, men had an average of 3.08 (frequently moving toward most of the time receive nonverbal cues from opposite gender) while women had an average of 2.55 (occasionally moving toward frequently receive nonverbal cues from the same gender). The question answers ranged from 1.0 = never to 4.0 = most of the time. The results indicate that men tend to receive nonverbal cues “frequently” from women while women tend to receive nonverbal cues “occasionally/sometimes” from men. The results indicate that both genders receive nonverbal cues from the opposite gender while texting, but men tend to receive them more than women.

Hypothesis 2

After considering the former information about confusion, conflict, and how gender affects the content of messages sent via computer-mediated communication, it was necessary to propose further hypotheses about how gender could influence not only the content of the message but also the amount of understanding. Therefore, if gender can affect a person's understanding of a received message, than it is probable that confusion can also be increased based on one's gender. Thus, the following hypothesis is stated:

H2: Females tend to perceive confusion at a higher rate than males when using lean media during computer-mediate communication.

In order to analyze the participants' answers regarding this hypothesis, each person was asked if he or she were ever confused when receiving messages, and if so, how often. Then, they were asked with what gender they normally had confusion. Lastly, they were asked the reasons for their confusion. The responses by the men were then compared to the responses given by the women. When the men were asked if they had ever been confused by a message, one hundred fourteen (92.68%) claimed that they had, while only nine (7.32%) stated that they had never been confused during computer-mediated communication. One hundred seventy (96.05%) of the women said that they had been confused after receiving a computer-mediated message while only seven (3.95%) claimed that they had never been confused. They were then asked how frequently they had been confused. Whereas three (2.44%) of the men stated that they were confused most of the time, six (4.88%) stated that they were never confused. Eight (4.52%) of the women stated that they were confused most of the time, while four (2.26%) claimed that they were never confused. The majority of both genders answered occasionally/sometimes. While the responses were somewhat different between the genders, it was difficult to determine the validity

because several of the respondents should have answered “N/A” instead of another option.

Finally, each person was asked which gender they usually received those confusing messages.

Whereas seventy-three (59.35%) of the men stated that they were usually confused upon receiving messages from females, only fifty (28.25%) of the females stated that they were confused by the messages received from their female companions. When twenty (16.26%) of the men claimed they received confusing messages from their male friends, one hundred six (59.89%) of the women stated they were confused when receiving a message from men. The two genders were then asked the reasons for their confusion in computer-mediated communication.

The results were then compared by gender. While one hundred (19%) of the men claimed that they were confused because of mistyped messages, seventy-two (14%) stated that the “tone” of text really puzzled them. Sixty-seven (12.88%) said that blunt replies baffled them while sixty-two (11.92%) of them men claimed that when there an absence of punctuation was confusing.

The rest of the reasons were then somewhat equally distributed. The female respondents overall answered similarly to the men. One hundred forty four (17.43%) of the women stated that mistyped messages were the most confusing while one hundred nineteen (14.41%) said that the “tone” of text was usually perplexing. While one hundred eight (13.08%) claimed that blunt replies were confusing, one hundred five (12.71%) circled “absence of punctuation”. These results therefore showed that both genders, when confused, are confused by similar reasons. The most popular reasons were mistyped messages, “tone” of text, blunt replies, and absence of punctuation.

After the results of each question for this section were given numerical data and run through SPSS, they were analyzed for significance levels. An Independent Sample t-test indicated lack of significance ($p = .204$) for the dichotomous question, “Have you ever been

confused when receiving a message via computer-mediated communication (text messages, e-mails, instant messages, etc.)?" When comparing the means, men had an average of 1.07 while women had an average of 1.04. The question answer choices were 1.0 = yes and 2.0 = no. The results indicate that both genders have been confused at some point while reading a text message but around a similar amount.

The second Independent Sample t-test indicated lack of significance ($p = .382$) for the frequency question, "How often have you dealt with confusion via computer-mediated communication (text messages, e-mails, instant messages, etc.)?" When comparing the means, men had an average of 2.27 (occasionally moving toward frequently confused) while women had an average of 2.20 (occasionally moving toward frequently confused). The question answers ranged from 1.0 = never to 4.0 = most of the time. The results indicate that both genders have dealt with confusion at some point during a computer-mediated conversation, but at a very similar rate.

The third Independent Sample t-test indicated significance ($p = .000$) for the dichotomous question, "Which gender do you usually have confusion via computer-mediated communication (text messages, e-mails, instant messages, etc.)?" When comparing the means, men had an average of 2.08 (confused by females) while women had an average of 1.52 (equally confused by both genders with a tendency toward mainly men). The question answer choices were 1.0 = male, 2.0 = female, and 3.0 = NA. The results indicate that men are more easily confused when conversing with women, whereas women are more equally confused by both with a tendency to be more confused when talking to men.

Hypothesis 3

After analyzing the previous data, it is clear within the given sample, that women tend to use more verbal cues than men. When these women do not see these types of nonverbal cues when reading computer-mediated messages, they tend to also receive more confusion than men. use more lean media than women. In stating this, it has also been shown that men are not as confused as women when receiving messages. With these hypotheses proven accurate, the third hypothesis is stated as follows:

H3: Females tend to perceive conflict at a higher rate than males when using lean media during computer-mediated communication.

In order to prove or nullify the third hypothesis, the participants were asked if they had ever dealt with conflict when using computer-mediated communication. If they answered ‘yes’, they were then asked how often and with which gender they normally experienced conflict. Finally, they were asked why they experienced conflict in those instances. The results were analyzed and compared by gender. While one hundred nine (88.62%) of the men stated that they had dealt with conflict during a computer-mediated conversation, fourteen (11.38%) stated that they had not. Surprisingly, only one hundred fifty five (87.57%) of the women stated that they had received conflict during a computer-mediated conversation while twenty-two (12.43%) of the women claimed that they had not dealt with conflict via CMC. The participants were then asked how often they dealt with conflict during their computer-mediated conversation. The majority of both genders circled occasionally/sometimes for their answers. While four (3.25%) of the men stated that they dealt with conflict most of the time, only five (2.82%) of the women claimed that they dealt with conflict most of the time. In contrast, twelve (9.76%) of the men said that they frequently/often dealt with conflict, while twenty (11.30%) of the women stated that

they frequently/often dealt with conflict. They were then asked with which gender they normally dealt with conflict. While eighty-two (66.67%) of the men answered female, only fifteen (12.20%) answered male. In contrast, fifty-two (29.38%) of the women claimed to have conflicting conversations with other females and ninety (50.85%) stated that they received the conflict from men. The respondents were then asked the reasons for such conflict. Eighty-five (17.82%) of the men answered the “tone” of text, seventy-five (15.72%) answered blunt replies, sixty (12.58%) answered mistyped messages, and finally forty-three (9.01%) answered text only. When the women were asked the same question, one hundred eleven (16.40%) circled “tone” of text, ninety-nine (14.62%) answered blunt replies, ninety-six (14.18%) circled mistyped messages, and finally fifty-nine (8.71%) answered lack of emoticons. The most popular reasons for conflict included “tone” of text, blunt replies, mistyped messages, text only, and lack of emoticons.

After the results of each question for this section were given numerical data and run through SPSS, they were analyzed for significance levels. An Independent Sample t-test indicated lack of significance ($p = .785$) for the dichotomous question, “Have you ever dealt with conflict while using computer-mediate communication (text messages, e-mails, instant messages, etc.)?” When comparing the means, men had an average of 1.11 while women had an average of 1.12. The question answer choices were 1.0 = yes and 2.0 = no. The results indicate that both genders have dealt with conflict at some point while reading a text message but around a similar amount.

The second Independent Sample t-test indicated lack of significance ($p = .547$) for the frequency question, “How often have you dealt with conflict via computer-mediated communication (text messages, e-mails, instant messages, etc.)?” When comparing the means,

men had an average of 2.20 while women had an average of 2.15. The question answers ranged from 1.0 = never to 4.0 = most of the time. The results indicate that both genders have dealt with confusion at some point during a computer-mediated conversation, but at a very similar rate.

The third Independent Sample t-test indicated significance ($p = .000$) for the dichotomous question, "Which what gender do you usually have conflict via computer-mediated communication (text messages, e-mails, instant messages, etc.)?" When comparing the means, men had an average of 2.09 (conflicting conversations with women) while women had an average of 1.69 (conflicting conversations with both genders). The question answer choices were 1.0 = male, 2.0 = female, and 3.0 = NA. The results indicate that men deal with conflict more frequently when communicating with women during computer-mediated communication whereas women tend to deal with conflict when communicating with both genders.

Chapter 5

Discussion

Through careful comparisons and analysis of the participants' responses, this study was able to explain more about interpersonal interaction in computer-mediated communication. To be more precise, the answers revealed more about how different genders influenced the verbal and nonverbal communication that takes place in CMC. Also, it demonstrated how lean media affected confusion and conflict in CMC and how gender affected that confusion and conflict. In order to properly understand the results of the survey, it is beneficial to analyze the results from the surveys and each hypothesis in order to properly discuss what each revealed about computer-mediated communication.

After observing the responses from all of the participants, it was discovered that a large percentage of participants had personally experienced confusion through computer-mediated communication. When asked the reasons for their confusion, the participants who had claimed to have experienced confusion "most of the time" or "frequently/often" declared that mistyped messages, the "tone" of the text, messages containing only text, messages lacking emoticons, blunt replies, and messages lacking punctuation were the leading causes. This shows that lean media impacts the majority of the reasons for confusion in computer-mediated communication. If individuals used more nonverbal cues when sending messages, mistyped messages might not be as confusing. Likewise, if individuals were to properly describe their feelings through emoticons or correct punctuation, confusion might not occur through the "tone" of text or messages lacking punctuation. Finally, through these answers, it is evident that confusion would be minimized if individuals would clearly explain themselves through a variety of nonverbal

cues and correct punctuation so that recipients of such messages would not receive what they consider “blunt replies”.

The research also revealed that not everybody who had been confused during computer-mediated communication had also experienced conflict. In fact, twenty people who had stated that they had been confused by computer-mediated communication circled no when asked if they had dealt with conflict. When referring to the former claim about confusing messages and conflicting messages caused for the same reasons, it can be stated that the claim is partially true. The “tone” of the text was the most popular reason for not only confusion in computer-mediated communication, but also conflict. In contrast to that claim, though, text only messages were not among the most popular reasons for conflict in computer-mediated messages. While that was one of the most popular reasons for confusion in CMC, it was not included in the top four reasons for conflict. While messages containing only text were not rated as one of the highest, reasons such as “tone”, blunt replies, lack of emoticons, and punctuation problems were included. Therefore, while “text only” was not circled the most, other responses dealing with text were. For instance, one of the most popular reasons for conflict was the “tone” of text. Perhaps, if these individuals sent or received an emoticon or correct punctuation simultaneously with the message, they might not have had to deal with afore mentioned conflict. This evidence therefore demonstrated that nonverbal cues are valuable and even necessary in computer-mediated communication when attempting to minimize the amount of conflict sent or received.

Through previous research conducted, it has been proven that gender does affect how individuals interact. Because gender has widely influenced the style, conversation topic, traits, and other “markers”, it has been stated that a conversation alone can suggest whether the communicator is male or female. One of these common traits is the use of nonverbal cues.

Females tend to use more expression and description when speaking to others in a conversation. Because this is commonly true for the majority of females, it can also be suggested that the same women would most likely use nonverbal cues or helpful descriptive words in computer-mediated communication in order to explain their thoughts more clearly. Therefore, the first hypothesis was stated:

H1: Females tend to use more nonverbal cues than males when interacting in computer-mediated communication.

In order to discover how accurate the first hypothesis was, the participants were asked how often they used only text, acronyms, elongated words, and acronyms. After they responded to those questions, they were also asked how often they received the same type of messages from same gender counterparts and opposite gender individuals. When the two genders were asked how often they used text only messages, the responses were surprisingly similar. Although the hypothesis stated that more men than women would use text only messages, the results showed that 10% more women used text only messages most of the time. 9% more of the men answered frequently/often, though. Because several factors could effect how the participants answered this specific question, it was necessary to ask how often they used specific type of nonverbal cues. The responses from these questions helped clarify whether the participants really used nonverbal cues or not. The first type of nonverbal cue discussed was acronyms. When the men were asked about their usage, almost 61% stated that they only occasionally or never used them while about 39% said that they used them frequently or most of the time. When the women were questioned about acronyms, approximately 47% claimed that they occasionally or never used them while 53% said that they used them frequently or most of the time. The significance ($p=.008$) of this question revealed that men on average ($m = 2.35$) used acronyms far less than women ($m =$

2.59). The participants were then asked about their usage of elongated words. Whereas the majority of both genders stated that they used them only occasionally or sometimes, the minority was distributed differently based on the gender. While 20% of the women stated that they used elongated words most of the time, only 4% of the men answered the same. In contrast, almost 24% of the men stated they never used elongated words while only 5% of the women said they never used elongated words. Through comparing the significance ($p = .000$) of these statistics, it suggests that women ($m = 2.59$) do indeed use elongated words more often than men ($m = 2.01$). The third and last type of nonverbal cue discussed was emoticons. Whereas almost 31% of the women stated that they used emoticons most of the time, only 7.32% of the men said they used them most of the time. Also, while only 5% of the women answered never, approximately 14% of the men answered the same. This significance ($p = .000$) of this question about emoticons showed that women ($m = 2.95$) use more emoticons than men ($m = 2.42$) therefore proving accuracy within the sample population.

In order to ask the participants about more than just their own usage of computer-mediated communication, they were asked about the messages they received from similar and opposite gender companions. Only about 3% of the male participants stated that they received nonverbal cues from other males most of the time; whereas, 30% of the men stated that they received nonverbal cues from women most of the time. Also, over 51% of the men stated that they received nonverbal cues from women frequently/often, but only about 19% stated that they received nonverbal cues from men frequently/often. In contrast to the men's responses, 28% of the women stated that they received nonverbal cues from other women most of the time and only about 2% stated that they never received nonverbal cues from women. About 14% of the women said that they received nonverbal cues from men most of the time and about 7% claimed that

they never received nonverbal cues from men. The significance ($p = .000$) of the first question about same nonverbal cues revealed that men on average ($m = 2.14$) had received them occasionally from other men during computer-mediated communication, whereas women on average ($m = 2.99$) received them from other women frequently. The second significant ($p = .000$) question revealed that men on average ($m = 3.08$) frequently received nonverbal cues by women, whereas women on average ($m = 2.55$) received nonverbal cues from both genders equally. The results showed how often women use nonverbal cues compared to men. In that comparison, it is evident that women do indeed use more nonverbal cues than men when interacting during computer-mediated communication.

Since women tend to use more nonverbal cues when communication via computer-mediated communication, they would most likely understand text more when accompanied by descriptive words, elongated words, acronyms, or emoticons. Therefore, when text is not accompanied by such nonverbal cues, the female recipients would most likely experience confusion. Thus, the second hypothesis is stated:

H2: Females tend to perceive confusion at a higher rate than males when using lean media during computer-mediate communication.

In order to discover the accuracy of this hypothesis, the participants were asked if they were ever confused when communication via computer-mediated communication, and if so, how often. While a larger percentage of women claimed to be confused most of the time when reading a computer generated messaged, it was only 4% higher than the men who stated the same. The majority of both genders stated that they occasionally/sometimes received confusion from computer-mediated communication. Overall, the average of men ($m = 1.07$) confused was very similar to the average of women ($m = 1.04$) causing the evidence to be insignificant ($p =$

2.04). Also, the men ($m = 2.27$) were confused during computer-mediated communication at a similar rate to the women ($m = 2.20$) causing this evidence to be insignificant ($p = 3.82$). In order to discover a clearer understanding, the participants were then asked to state that gender they usually received confusion. Nearly 60% of the men claimed that they were confused by their female companions' messages and only about 16% stated that they were confused by other men's messages. Only about 28% of the females stated that other women confused them whereas almost 60% of the females claimed that men confused them. Even with these surprising results, the combined total still represented females as the more popular factor of computer-mediated confusion. When the reasons for confusion was analyzed, both genders stated that mistyped messages, "tone" of text, blunt replies, and absence of punctuation were the main causes of misunderstanding and confusion. While "text only" was not selected as one of the top reasons, each of the most selected reasons pertain to messages containing only text. If these messages were sent simultaneously with some type of nonverbal cue, then the "tone" of the message might not have been as bad or the message itself might not have seemed to be as blunt. While the results did not reveal any spectacular difference, they did show that there was a slightly higher percentage of females that were confused. If the answers were analyzed purely by self-report about whether they were confused during computer-mediated communication and how frequently they were confused, nothing significant would have been revealed; however, because the participants were also asked with which gender they were usually confused, a significant ($p = .000$) amount of difference was exposed. On average, men ($m = 2.08$) stated that women confused them. In contrast, on average, women ($m = 1.52$) stated that both genders confused them. Because the women's answers were more equally distributed than the men, one could wonder about the reasons. Perhaps, when women talk more with their significant other than any

other man causing the amount of conflict with men to increase. Regardless, the results revealed how gender definitely impacts confusion during computer-mediated communication and that women more commonly influence confusion in computer-mediated communication than men.

With the former information in mind, it would seem likely that because women prefer using nonverbal cues in the conversations, they would be confused or even upset when receiving messages not containing such nonverbal cues. Then, when these women are upset, they might read something differently causing conflict. Therefore, the third hypothesis was stated:

H3: Females tend to perceive conflict at a higher rate than males when using lean media during computer-mediated communication.

In order to determine the accuracy of this hypothesis, the respondents were asked if they had ever dealt with conflict when communicating via computer-mediated communication. The answers to this question were surprising and fairly difference than all of the previous results. The question asking if they had participated in conflict in CMC or not was insignificant ($p = .785$) showing that both genders had dealt with conflict but in almost the same amount. While the percent difference was slight, a larger percentage of men ($m = 1.11$) than women ($m = 1.12$) stated that they had dealt with conflict when communicating via CMC. In order to determine whether these genders showed a difference in frequency, they were also asked how often they had dealt with conflict, but again, the results were insignificant showing that men ($m = 2.20$) dealt with conflict slightly more than women ($m = 2.15$). Because this question limited the results to the participants alone, they were also asked which gender normally caused the conflict they did receive. Even though the female participants did not experience conflict in CMC as much as the male participants, the answers to this question showed that a larger percentage of conflicting messages resulted from conversations including females. In fact, almost 20% more of

the conversations dealing with conflict involved women. The results of this question were highly significant ($p = .000$) showing that men ($m = 2.09$) stated they had more conflicting relationships with women than men. Similarly, women ($m = 1.69$) stated that they had more conflicting relationships with other women but not as much as men. Because the women's responses revealed a more equal average than men, it is evident that women have conflict with men more than men do. Therefore, one could surmise that romantic relationships could have been a factor influencing the answers of the female participants. These results showed how women perceive conflict at a higher rate than males during computer-mediated communication. The participants were then questioned about the reasons for the conflicting conversations. Just like the reasons for confusion, the reasons for conflict did not vary greatly based on gender. In fact, the top three reasons by both genders were "tone" of text, blunt replies, and mistyped messages. Therefore, while it can be stated that lean media can cause more conflict when communicating via CMC, it is still unclear if lean media would cause more conflict in females than in males. Even though the participants' answers about themselves showed an insignificant difference between the genders, the significance of the answers about other individuals revealed how much more often women were a factor of conflicting conversations in computer-mediated communication.

Chapter 6

Limitations and Further Research

While these results were beneficial for the research of this study, they had various limitations. First, the data analyzed depended solely on the participants' ability to clearly and honestly answer questions about their personal computer-mediated conversations. Also, the participants who attempted to answer the questions by memory may have forgotten past interactions, therefore causing them to answer questions inaccurately. Because the research focused on confusion and conflict, the participants needed to have experienced some form of both to improve the results of the study. Unfortunately, many of the participants stated that they had never experienced confusion or conflict in their computer-mediated conversations. Also, many of the college aged students that took the survey may not have been as concerned with the results, causing them to rush through the questions. For these reasons, the accuracy of the recorded data could be skewed.

Whereas the sample size used in this study was an appropriate number, a larger number of participants would have provided more data and more conclusive results. If a larger number of participants were surveyed, a greater number of gender comparisons could have been made. Not only was the number of participants limited, but also the ethnicity, age, and geographic region. The majority of the participants were Caucasian females between the ages of 18-21. The unbalanced variety of participants limited the number of possible comparisons. The results of this study were unable to show the differences among various ethnicities when using computer-mediated communication. Because the majority of volunteers were between the ages of 18-21, the data could not clearly reveal how older CMC users tend to respond to confusion and conflict. Also, since the majority of these answers originated from a liberal arts mid-Atlantic private

university, they most likely reflected similar types of beliefs and ideas. Therefore, these respondents might believe or think in a similar way towards the types of questions given in this study. While the college students attending the university represent a diverse population, the majority of the participants consists of Caucasians from the east coast of America. It would be a great benefit to this study if this survey were given to individuals not only around the region but also around the country. For these reasons, if such a study were recreated, it would be beneficial to recruit a broader, more diverse sample.

The instrument used to collect the data signified another limitation to this study. Originally, the survey was developed to prohibit individuals that answered ‘no’ to certain questions the ability to answer questions that followed. For instance, if they stated that they were never confused when using computer-mediated communication, they would then be locked out of answering questions regarding the reasons for their confusion. Unfortunately, because the survey was created on a website without a variety of options, the researcher was unable to close certain questions if previous questions were answered a certain way. In order to “fix” the problem, the option “N/A” was added to the questions so that individuals answering “no” would be able to select “N/A” for the following questions. Regrettably, it was evident in the results that many individuals that answered “no” answered the following questions in a variety of different ways and not just with an “N/A”.

Other questions in the survey could have been improved with the addition of the option, “other”. For instance, when the participants were asked to circle all of the reasons for their confusion, they would have been allowed to circle “other”. If the researcher wanted to know precise answers, the participants would have been given the option of typing in the other reasons. Also, several questions asked participants to circle how often they used various types of

nonverbal cues during computer-mediated communication. The survey only allowed four options. A beneficial way to improve these types of questions would have been to add a neutral answer for those who were unable to honestly circle the other options. Lastly, the questions themselves could have been written differently so that the participants could have better understood the questions. For instance, many of the participants who stated that they always used messages with only text, stated that they also used acronyms, elongated words, or emoticons. Because of this, some of the questions about “text only” messages were skewed and most likely incorrect. For future research, it would be beneficial to include additional options as well as some open-ended questions for participants to answer.

Another aspect for future consideration would be additional research from various angles or ideas. Because computer-mediated communication continues to change and evolve, individuals could change their answers as well. This study could also be analyzed by participants’ age. It could question whether romantic relationships cause more confusion and conflict than conversations between parents and children. Likewise, romantic relationships could be analyzed by length of time involved or how they originally met. For instance, if a couple met online, their conversations via computer-mediated communication might be a lot stronger than a couple that had met face-to-face in a college classroom.

Even though the study could be improved with the former suggestions, the study was still successful in researching and discovering more about confusion, conflict, and gender roles in computer-mediated communication. This study revealed how lean media influences confusion and conflict in computer-mediated communication and that rich media is still a more valued form of communication. The results from the third hypothesis also added to past research by reinforcing the belief that females tend to use more nonverbal cues than males. Finally, while the

study did not show a great difference between genders in relation to confusion and conflict, it did reveal interesting data and ideas for future research regarding computer-mediated communication.

Conclusion

The purpose of this study was to investigate and discover more about computer-mediated communication in regards to lean media. It analyzed how individuals' perceptions of lean media caused overall confusion and conflict. Then, it narrowed its focus to observe how gender perceptions of lean media influenced confusion and conflict. The hypotheses stated in this study were:

H1: Females tend to use more nonverbal cues than males when interacting in computer-mediated communication.

H2: Females tend to perceive confusion at a higher rate than males when using lean media during computer-mediate communication.

H3: Females tend to perceive conflict at a higher rate than males when using lean media during computer-mediated communication.

After creating, uploading, and distributing surveys to various individuals, the results of the online surveys were than gathered and analyzed. While some questions regarding the participants' self-report were not significant, other questions regarding messages received from friend proved to be very significant. Through careful analysis, the overall findings of this study revealed that women had a stronger tendency than men to use nonverbal cues while interacting on computer-mediated communication. They also showed how women generally received confusion and conflict at a higher rate than men.

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Appendix A

Reading Between the Lines: Gender and Lean Media Conflict

Informed Consent Form

Purpose of the Study:

This is a Communications research study that is being conducted by Jennalee Conner at Liberty University to determine how gender influences confusion and/or conflict in computer-mediated communication. You are being asked to participate in this study in order to help researchers gain insight and further understanding of confusion and conflict caused by text based messages. Your input will also benefit further understanding of gender differences in computer-mediated communication.

What will be done:

You will be asked to complete an online survey that consists of 19 questions and will take approximately 15-20 minutes to complete. This survey contains questions about your personal experience and usage of computer-mediated communication such as text messaging regarding not only how you and/or your friends text but also how these type of text might or might not cause confusion and/or conflict. You will also be asked some basic demographic information (e.g., age, gender, racial/ethnic identity, and length of time and frequency spent using computer-mediated communication.

Benefits of this Study:

You will be contributing to furthering research regarding communications and more recent technology, especially text messaging. You will also provide more information regarding gender differences in communication when various technologies are used.

Risks or discomforts:

No risks or discomforts are anticipated from taking part in this study. If you feel uncomfortable at any part during the survey, you can withdraw from the study altogether. If you decide to quit at any time before you have finished the survey, your answers will NOT be recorded.

Confidentiality:

Your responses will be kept completely confidential. We will NOT know your IP address when you respond to the Internet survey. Only the researcher will see your individual survey responses.

Decision to quit at any time:

Your participation is voluntary so you are free to withdraw your participation at any time. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you do not want to continue, you can simply leave this website. If you click on the “Agree and Continue”, you will be directed to the first part of the survey. At the end of the survey, you will be given the option of clicking on the button labeled “submit”. If you do not click on the “submit” button, your answers and participation will not be recorded. If you do click

on the “submit” button, your answers and participation will be recorded and included in the survey.

How the findings will be used:

The results of the study will be used for scholarly purposes only. The results from the study will be presented in an educational setting and will include complete anonymity and confidentiality. The researcher will only discuss overall results without bringing attention to specific individual's answers.

Contact information:

The researcher conducting this study is Jennalee Conner. If you have questions, **you are encouraged** to contact Jennalee Conner at jejarrett@liberty.edu or Dr. David Allison at dallison@liberty.edu, Associate Prof of Communication Studies, 1971 University Blvd., Lynchburg, VA 24502 or email dallison@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, Dr. Fernando Garzon, Chair, 1971 University Blvd., Suite, 1582, Lynchburg, VA 24502 or email fgarzon@liberty.edu

By beginning this survey, you acknowledge that you have read this information and agree to participate in this research, with the knowledge that you are free to withdraw your participation at any time without repercussions.

* Do you agree?

Agree and Continue

Appendix B

Thesis Survey**Text Message Usage**

Using text messages from your cell phone as a reference, answer the following questions with the best answer.

1. How often do you use messages containing only text?

- Never
- Occasionally/Sometimes
- Frequently/Often
- Most of the time

2. How often do you use acronyms (LOL)?

- Never
- Occasionally/Sometimes
- Frequently/Often
- Most of the time

3. How often do you use elongated words (soooooo)?

- Never
- Occasionally/Sometimes
- Frequently/Often
- Most of the time

4. How often do you use emoticons (😊 😞)?

- Never
- Occasionally/Sometimes
- Frequently/Often
- Most of the time

5. How often have you received acronyms, elongated words, or emoticons from the same gender?

- Never
- Occasionally/Sometimes
- Frequently/Often
- Most of the time

6. How often have you received acronyms, elongated words, or emoticons from the opposite gender?

- Never
- Occasionally/Sometimes
- Frequently/Often
- Most of the time

Confusion and Conflict

Answer the following questions based on your own experiences with conflict via computer-mediated communication.

7. Have you ever been confused when receiving a message via computer-mediated communication (text messages, e-mails, instant messages, etc.)?

- Yes
- No

8. What are some reasons for the confusion? Circle all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Text only | <input type="checkbox"/> Absence of punctuation |
| <input type="checkbox"/> Mistyped message | <input type="checkbox"/> Lack of typed expressions (*sigh*) |
| <input type="checkbox"/> Blunt replies | <input type="checkbox"/> "Tone" of text |
| <input type="checkbox"/> Lack of emoticons :) | <input type="checkbox"/> Length of text |
| <input type="checkbox"/> Capitalization (NO) | <input type="checkbox"/> Lack of acronyms |
| <input type="checkbox"/> Added punctuation (!!!!!) | <input type="checkbox"/> N/A |

9. How often have you dealt with confusion via computer-mediated communication (text messages, e-mails, instant messages, etc.)?

- Never
- Occasionally/Sometimes
- Frequently/Often
- Most of the time
- N/A

10. With what gender do you usually have confusion via computer-mediated communication (text messages, e-mails, instant messages, etc.)?

- Male
- Female
- N/A

11. Have you dealt with conflict while using computer-mediated communication (text messages, e-mails, instant messages, etc.)?

- Yes
- No

12. What are some reasons for these conflicts? Circle all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Text only | <input type="checkbox"/> Absence of punctuation |
| <input type="checkbox"/> Mistyped message | <input type="checkbox"/> Lack of typed expressions (*sigh*) |
| <input type="checkbox"/> Blunt replies | <input type="checkbox"/> "Tone" of text |
| <input type="checkbox"/> Lack of emoticons :) | <input type="checkbox"/> Length of text |
| <input type="checkbox"/> Capitalization (NO) | <input type="checkbox"/> Lack of acronyms (LOL) |
| <input type="checkbox"/> Added punctuation (!!!!!) | <input type="checkbox"/> N/A |

13. How often have you dealt with conflict via computer-mediated communication (text messages, e-mails, instant messages, etc.)?

- Never

- Occasionally/Sometimes
- Frequently/Often
- Most of the time
- N/A

14. With what gender do you usually have conflict via computer-mediated communication (text messages, e-mails, instant messages, etc.)?

- Male
- Female
- N/A

Demographic Questions

Circle the answer that best describes you.

15. What is your age?

- 18-21
- 22-25
- 26-30
- 31-40
- 41-50
- 51-60
- 61 or over

16. What is your gender?

- Male
- Female

17. What is your racial/ethnic identity?

- American Indian / Native American
- Asian
- Black / African American

- Hispanic / Latino
- White / Caucasian
- Pacific Islander
- Other

18. How long have you communicated via computer-mediated communication (e-mail, text message, online chat, etc.)?

- 0-1 years
- 2-3 years
- 4-5 years
- 6+ years

19. How often do you communicate via computer-mediated communication (e-mail, text message, online chat, etc.)?

- Never
- 0-10 times a day
- 11-20 times a day
- 21-30 times a day
- Other