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Lost in Translation: Emotion and Expression through Technology

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Abstract

My Thesis study was designed to bring to topic certain issues involved with CMC (computer-mediated communication.) Often we are presented with confusing or misleading situations when it comes to expressing our emotions through technological means. It is important that we are aware of certain issues such as the use of emoticons, expressing sarcasm, and the ongoing trend of Internet slang. These various aspects can create confusion in CMC leading to a loss in translation. My survey study was designed to probe deeper into these issues by asking general questions and by analyzing sample CMC scenarios.

A Technological World

Today's world is one filled with different technologies, from our constantly connected cell phones to our miniature portable laptops. We use technology in order to stay connected to friends, colleagues or to meet new people. Technology is supposed to bring us together and allow us to communicate globally, but can all this technology actually draw us further away from one another? Some have argued that technology is pulling us away from our basic human forms of expression and destroying face-to-face interactions. Eric J. Fox writes in his online article "People around the world are moving so fast, trying to do so much, that humanity as a whole is slowly choking itself with its own progress."[1] Many others share Fox's sentiments that while technology is allowing us to stay constantly connected; we are moving through life at an accelerated pace. This fast pace is one that demands texting or instant messaging rather than in-person interaction. This type of instant gratification is due to the accelerated pace of CMC (computer-mediated communication). While it may seem reasonable for those who work long hours to send e-mail or instant messages rather than meeting in person, others who are not pressed from time are choosing this type of communication over natural face-to face interactions.

Most of us can think of at least one person we know who prefers to text, instant message, or e-mail to communicate indirectly; it may even be ourselves. We may also

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[1] http://www.helium.com/items/447476-how-technology-is-destroying-mankind?page=2

know someone who has more friends geographically distant than in their own local area. One blogger writes:

> *"In the old days, your friends were those that lived near you, or who you grew up with, but now I have friends all over the world. I say "friends", but how well do most of these people know me? They have never visited with me, and most have never even seen my face. Can I really consider these people my friends?"[2]*

The idea of having Internet friends is not a new one, and many who use the internet for socialization purposes have made friends that they never plan to physically meet. However, in some cases a great deal of time is spent communicating with internet friends with some friends choosing to speak over the phone and others who remain using CMC. CMC may be the only form of communication that these individuals use and each must be careful that they present their expressions and emotions adequately. Face-to-face interaction cues are not available to indicate certain expressions that can be lost in translation over the Internet. Additionally, many argue that venues of socialization that were once available to us are now being replaced by online communication.

With less face-to-face interactions and more online friends whom we never see, many feel that we are losing important human emotional elements such as facial expressions, body language, and vocal tones. Children and young teenagers are starting to use and communicate through the internet at younger ages. Will these adolescents

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[2] http://www.forevergeek.com/2007/11/how_technology_is_destroying_society/

gradually lose the necessary communicative skills they need in face-to-face communication? It has already been researched that Internet slang has infiltrated into spoken words and academic writing.[3] It is difficult to predict if education alone will make sure that young individuals learn how to effectively communicate without the use of technology. A gradual deterioration in expressing our emotions naturally may ultimately lead to communicative disorders. Can human emotions be expressed without natural facial, vocal or body language indicators? Let us first define what constitutes emotions.

What are emotions?

There are many definitions and theories on the cognitive science behind our emotions. The basic definition states that an emotion is a mental and physiological state associated with thoughts, feelings and behaviors.[4] In Jerome Kagen's book *"What is Emotion – History, Measures and Meanings"* he notes that emotions occur due to the brain's activity, but the specific emotion that occurs depends on the setting and person's history and biology. Scientifically, it is a mystery how our individual experiences create the complex emotions deriving from our brain states. For example, we may see two people fighting where person one is expressing the emotion of anger by yelling at person two who is seemingly non-expressive and non-vocal. Without knowing the history of person one, we might incorrectly assume that they have a hot-temper or that they are being too harsh. Similarly, we might assume that the quiet person is innocently being punished without knowing their background. Kagen notes that the appraisal process in

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[3] http://dailyuw.com/2006/11/27/staff-editorial-internet-slang-in-scholarly/

[4] http://en.wikipedia.org/wiki/Emotions

the brain resembles a game of twenty questions where "once the player knows the secret object is an animal, and not a vegetable or mineral, she or he still has to exclude a great many possible alternatives before inferring the correct answer." In essence, understanding emotion in face-to-face interactions involves many different situational clues and factors that help the brain to draw conclusions.

According to Paul Ekman's *Handbook of Cognition and Emotion*, there are "basic emotions" that when combined together, form more complex emotions. Ekman uses the example of "smugness" which can be formed by the two basic emotions of happiness and contempt. He believes that there are certain characteristics called "Distinctive Universal Signals," which allow us to distinguish between emotions. These characteristics tell us what the person is thinking about such as memories, what happened to bring about the current expression, and what is likely to happen next. For example, when we see a person holding an ice-cream cone with a satisfied expression, we would infer that the person is thinking about positive feelings or memories associated with the pleasant taste. We would also know that the person is responding to the taste of the ice-cream which is bringing out their current expression and that they are likely to continue eating. Perhaps more importantly, Ekman notes that emotions are critical to the development and regulation of interpersonal relationships. His research confirms that facial expressions help to form attachments, such as in infancy, and help us to regulate our states of aggression. One of his studies researched patients with facial paralysis who when asked explained that they had trouble developing and maintaining relationships due to the fact that they could not produce facial expressions. This study raises an important question of whether we need to see emotions expressed through facial movements, body movements,

vocal tones, etc. in order to gather sufficient information about what is happening around us. In our technological era, can we effectively express ourselves without these important elements?

Personal Story

"The following is a true story of friends I have met online through an observational viewpoint. All names have been changed."

There are many online games where players are able to create characters that interact with others. While playing one of these online games, I met two friends whom I became close with; Meredith and Joseph. Meredith is a single mom and Joseph is a divorced man, both living alone on different sides of the globe. Each day I witnessed them in the game talking and doing things together such as questing. Quests are stories that the game provides to allow cooperation with others by finding clues or items. Meredith and Joseph always did these quests together and Meredith explained to me that while they were on opposite sides of the globe, she felt close to Joseph. She said that questing with him or seeing him log into the game each day made her feel closer to him. I could tell they liked each other by the way both expressed their emotions through text. It may seem that this is difficult, if not impossible, to do without facial expressions or body movements. However, Meredith and Joseph read each others emotions well and would sometimes explain to me that they knew the other was not having a good day. While written words may sometimes not always get some messages across, such as sarcasm, when two people such as Meredith and Joseph are used to each other's style of written text, speed, and implied tone, it becomes apparent that emotions can be felt. One day

when I had logged in, Meredith came to me asking if Joseph had talked to me today. I told Meredith he had not and asked her why she was concerned. Meredith said that Joseph had been logged on but was not "acting" normally or typing to her as he used to, and she suspected that something was wrong. Later that day, Joseph did finally tell her what was wrong and it was news that she thought she would never hear. Joseph was sick and he would be going into chemotherapy for treatment. After knowing the two of them for so long, I felt a deep sadness that Meredith would only feel intensified. I cannot speak on behalf of what her feelings were, but I knew that the news was affecting my own feelings. Meredith and I both felt the emotion of sadness even though our only form of communication was through technology. This story is an example of how online friends are not only people with whom we talk, but people we get to know on a personal level and care about. The online gaming world is only one internet facet that allows individuals to meet and express themselves. This story is only one of many examples where we are able to express our emotions through technology without the need for face-to-face interaction. Additionally, there are many different indicators used in CMC that help us to show our emotions, but do these options have limitations?

The Use of Emoticons

In the International Communication Association's research article on "Expressing Emotions Online: An Analysis of Visual Aspects of Emoticons" it states that "emoticons, that is, *emotional icons*, are visual representations of facial expressions used in CMC to indicate the mood and/or emotion of a user." In CMC, the primary form of communication is text, although technological advances have enabled the transmission of

images and sound. Some emoticons use text such as a ":)" symbol to represent a smiling face when the user tilts their head to the left, while others use graphical representations of a face. Yahoo messenger, amongst others, has a general set of emoticons they provide to users. For example:

The picture above shows the various ways that we can express our basic human emotions of happiness, sadness, anger, and love. There are also other emoticons included to express more complicated emotions such as a smiley with two "z's" over the forehead. This emoticon could use to express emotional states such as exhaustion. The emoticon displaying folded arms and a face that is looking away could be used to express displeasure or disagreement. Some emoticons do not convey emotions but rather supplement written text with an image. For example, the emoticon showing laughter by tilting the face upward can be used in place of the common internet slang word "ROTFL" or "ROFL" meaning "rolling on the floor laughing." The article also makes note that the human face represents a delicate and sophisticated communicative devices that is not always easy to reproduce electronically.

Can the use of emoticons substitute for facial recognition cues? The International Communication Association's study states it is difficult to design emoticons that accurately replicate delicate human facial features and translate it into a computer image. In this sense, emoticons cannot substitute for nonverbal cues in CMC and should be used merely as visual enhancements. However, as technology progresses, emoticons may grow and expand to take on additional meanings subjective to the parties involved. For example, there are two individuals who communicate through instant messaging daily and have grown to know each other well over the course of a few years. Each person has grown accustomed to the other's style of writing and frequent or infrequent use of emoticons. When one individual decides not to use a specific emotion such as laughter when they normally would, it can cause confusion. The individual on the receiving end may ask the other person if there is something wrong. Another example is when a user is grieving over the recent loss of someone close to them and can only find the emoticon displaying a sad face to show their emotions. Individuals who view the sad emoticon and know the background of the situation understand that it takes on a much deeper meaning that emoticons have yet to reflect. These are examples where emoticons are subjective to the individual parties involved and may be able to substitute for nonverbal cues. The concern and notification for the lack of emoticons present where one normally uses them emphasizes that emoticons can hold meanings and be used more than just a visual aid.

Cultural Differences

It may be difficult for online friends that are culturally different to communicate effectively. However, the International Communication Association's cross-cultural study on emoticons found that:

> *"Regardless of their cultural background, the respondents recognized and labeled facial expressions of enjoyment, anger, fear, sadness, disgust, and surprise in the same way. Therefore, these empirical studies demonstrated that facial expressions of "basic emotions" were culturally universal."*[5]

While this may hold true for facial expressions of "basic emotions" another study done by Masaki Yuki of Hokkaido University delves into further analysis. His study focuses on an individual's cultural background when identifying facial cues. Specific parts of the face are weighted differently when interpreting which emotion a person is expressing. Yuki makes note that the eyes are more difficult to control than the mouth when we express emotions. His study pertains to the United States and Japan, where the United States tends to interpret emotions based on the more expressive part of the face, the mouth, and Japan focuses more on the eyes. This is due to cultural differences where the

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[5]
http://www.allacademic.com/meta/p_mla_apa_research_citation/0/1/4/1/7/p14175_index.html

Japanese do not overly display emotion and rarely smile or frown using their mouths. Their culture is structured around humbleness and emotional suppression. In contrast, Americans are raised to be individualists and to openly express their emotions.

Researchers have found that there are facial "dialects" or "accents" in nonverbal cultural communication. These accents are understood in specific cultures where individuals rely on them for verification in interpreting emotions. While the basic emotions of sadness and happiness are easily recognized across cultures, not all emotions are easily interpreted and cultural differences act as the missing piece in the puzzle. Yuki's research studies used different pictures that showed combinations of eye and mouth expressions. Japanese students chose the pictures with happier-looking eyes over the pictures with smiling mouths indicating overall happiness. In contrast, American students choose the pictures with happier-looking or smiling mouths over expressive eyes and selected these pictures as being happiest. These findings parallel the same research done using emoticons. Japanese students use emoticons that have expressive eyes and a neutral mouth such as "^_^" where the "^" symbol represents the eyes expressing happiness and the "_" symbol displays a neutral mouth. Americans use emoticons such as ":)" representing a smiling face with neutral eyes and an expressive smile. Yuki's research suggests that:

> *"Cultural norms for the expression of emotions will impact the predominant facial cues individuals use to recognize emotions, with the eyes being a more diagnostic cue for Japanese, and the mouth being a more diagnostic cue for Americans."*

Many American students did not understand how to interpret the emoticons with expressive eyes. Additionally, the Japanese language is encoded using double-byte character codes. This results in a larger variety of characters that can be used in emoticons. These double-byte characters cannot be displayed in ASCII (American Standard Code for Information Interchange). Many American computers will not be able to read the type of emoticons used with double-byte characters. This is only one aspect of what can be lost in translation in CMC. While cross-cultural emoticon can create misunderstandings, they can also adapt to form new meanings, as discussed by the previous example of using a sad smiley. This shows that emoticons can be used for more than just visual enhancements and are able to adapt and for new meanings to alleviate confusion in CMC.

Identifying Sarcasm

While our emotions can be lost in translation through the use of culture-specific emoticons, sarcasm is another piece of information that can also be lost in CMC. Sarcasm is defined as "a mode of satirical wit depending for its effect on bitter, caustic, and often ironic language that is usually directed against an individual."[6] When individuals express sarcasm in a face-to-face setting they expect that others will pick up on it. According to Patricia Rockwell's research study, "Yeah, right!: A Linguistic Analysis of Self-reported Sarcastic Messages and Their Contexts" many forms of sarcasm are dependent upon the

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[6] http://www.merriam-webster.com/dictionary/sarcasm

tone of a person's voice. Using sarcasm in written text is much harder to understand and grasp than sarcasm used in dialogues. Without the inflection of emotion and tone in a person's voice, sarcasm over the internet can be confusing and is often misread. Internet users who post messages on forums have had trouble expressing sarcasm in ways that all readers will be able to understand. In response, a trend has emerged that includes indicating sarcasm in online forum posts by making pseudo HTML (HyperText Markup Language) tags such as <sarcasm> and </sarcasm>. For example, a forum user would post "<sarcasm> I love this thread </sarcasm>" to indicate the intended sarcasm that the user does not love the thread. (A thread is another term for an internet post that has multiple replies to it.) Many forums users have dropped the initial <sarcasm> tag and only use </sarcasm> or /sarcasm after their posts. The use of italics has also been used to express sarcasm over the internet. For example:

> Person A: "Do you think I've gained weight recently?"

> Person B: "Oh yeah, a *ton* of weight."

The italicized word "ton" indicates that the word should be read in a tone that is sarcastic. The use of italics helps individuals who are communicating online to sound out words and sentences as if they were said in a dialogue. As discussed previously, emoticons can be used to take on additional meanings. Additionally, emoticons can also be used to help indicate when sarcasm is being expressed in CMC. According to the Sarcasm Society™:

> *"By simply using one of the following emoticons you'll be able to convey sarcasm. However, be forewarned that the chances of your*

emoticons successfully communicating your intentions are entirely

dependent on the quality of your sarcasm, as well as the opposite

party's ability to comprehend sarcasm."

The emoticons that the Sarcasm Society™[7] notes are used to indicate sarcasm are listed below:

:) – A smiling face

;) – A winking face

:P – A face with a tongue sticking out

>:) – An evil smile[8]

Using the previous example, an individual could use one of these emoticons as follows:

Person A: "Do you think I've gained weight recently?"

Person B: "Oh yeah, a ton of weight. ;)"

The use of the ";)" symbol or winking emoticon helps to indicate that the person is not intending to make a rude negative remark about the person's weight. The emoticon allows the recipient to understand that the comment is meant sarcastically and the speaker does not mean harm. Different emoticons can be used in place of the winking emoticon such as the eye rolling emoticon. This emoticon is has eyes that move in a circular motion to simulate a person rolling their eyes at you. If Person A and Person B were

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[7] http://www.sarcasmsociety.com/onlinesarcasm/

[8] http://en.wikipedia.org/wiki/List_of_emoticons

speaking face-to-face, a simple eye roll after the statement "Oh yeah, a ton of weight" would indicate sarcasm. Similarly, the internet provides emoticons that express facial emotions and expressions we make when communicating in person. When individuals' primary form of communication is typed, it is very important to the relationship that each individual does not misinterpret a statement. While many internet users or those who frequently use sarcasm can easily pick up on the use of it in a typed context, many who are new to CMC or who do not frequently use sarcasm will not able to pick up on it. As research has shown, the tone in a person's voice carries weight when we try to understand meaning in sentences. It is difficult to re-create the tone and pitch of vocal elements thus; many online have turned to using helpful indicators such as HTML tags, italics, and emoticons. However, there is no current standard way of indicating sarcasm over the Internet. Many users express a need for having a recognition system such as backwards italics, which may develop in the future. What happens when internet users take CMC into their own hands?

Internet Slang

Internet slang is a type of slang language that is used CMC and has grown in popularity. It consists of slang words, abbreviations, and acronyms that users have created in an effort to save keystrokes. Terms have originated from various sources including "Bulletin Boards, AIM, Yahoo, IRC, Chat Rooms, Email, Cell Phone Text

Messaging, and some even as far back as World War II."[9] Slang words are used mainly in instant messages but can also carry over into e-mails, written communication or even verbal communication. It is important to note that there are an undefined number of internet slang words and abbreviations because many are created on the spot and gradually become accepted and used. This can cause confusion and frustration for users who do not know internet slang and need to decipher messages containing many different slang words or abbreviations. Websites such as noslang.com offer a full dictionary of internet slang words from the common "LOL" for "laughing out loud" to the not so common "AYST" meaning "are you still there?" With a countless number of abbreviations it is easy to imagine a phrase such as:

"Hey, h/o h2tb, afk"

This phrase can be very confusing to those who are not familiar with the terms. Meaning "Hey, hold on, I have to go to the bathroom. I'm away from my keyboard." is shortened from fifteen words to one word and three abbreviations making it easier and faster to type. The number "2" is also substituted for the word "to" only saving one keystroke. A message like this can be easily lost in translation if the receiver fails to recognize it. Clearly, internet slang dictionaries are not only useful but vital when an unlimited number of slang and abbreviations are available to use. "Another thing common to internet communication is the truncation and morphing of words to more typing-friendly

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[9] http://www.noslang.com/dictionary.php

forms. These may one day creep into common usage and end up in the dictionary."[10] For example:

- "addy" for address

- "pix" for picture/s

- "prolly" for probably

An example of an internet slang word is "newbie" or "noob" which means a new person that is unfamiliar with the topic of discussion. Sentences that are filled with abbreviations can be extremely difficult, if not impossible, to decipher and interpret. Many may assume that the receiver of the message knows the acronyms or slang they are using. In some online communities such as the online gaming community, slang words develop that are specific to the group or subject matter. In his online article "Notes from the Language Underground" Grant Barrett writes:

> *"Other types of Internet slang borrow offensive words from the real-world and apply them to the online community. A "troll" for example, is someone who disregards netiquette in a newsgroup, forum or chat room by attempting to start arguments or flame wars — more Internet slang for heated arguments that spiral out of control into personal attacks."*

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[10] http://knowledgerush.com/kr/encyclopedia/Abbreviations_used_online/

Sometimes in CMC slang words, abbreviations or acronyms can adapt and change to form new or additional meanings defined as semantic shifts. For example, the common "LOL" (laughing out loud) is typically used to replace where laughter might occur in face-to-face communication. However, variants have emerged such as "laffs" and "lulz" which is typically used when the laughter is obvious or sarcastic. It can also be referred to as "cheap laughter" or "false, forced laughter" that occurs when the joke has been heard before or the audience can see the punch lines.[11] Another variant of LOL is the trend of adding words to the ending of LOL such as "lollerskates" or "lollercopter" which combines roller skates and helicopter to LOL. Barrett writes that these terms are used to express "laughing out loud a lot" where similarly in Asian CMC users add "x's" to the end of LOL forming slang such as "lolx" or "lolxxxx." It is important to note that both emoticons and slang words differentiate across cultures and can adapt in their own specific ways. Cross-cultural communication can be lost in translation even more so with the combination of new slang words and the use of different types of emoticons.

Research Survey

For my research survey, I used the website surveymonkey.com to host my questionnaire. I received a total of 251 responses to the following questions:

11
http://thestar.com.my/lifestyle/story.asp?file=/2009/4/8/lifefocus/3607740&sec=lifefocus

1. Age:

2. Sex:

3. How many hours per day do you spend communicating through non face-to-face communication?

   0-2

   2-4

   4-6

   6-8

   8+

4. What is your primary method of communication?

   E-mail

   Instant message

   Text

   Telephone

   Face-to-face

   Other

5. I am comfortable expressing my emotions through e-mail communication.

   Strongly agree

   Somewhat agree

   Neutral

   Somewhat disagree

Strongly disagree

6. I am comfortable expressing my emotions through instant messaging communication.

    Strongly agree

    Somewhat agree

    Neutral

    Somewhat disagree

    Strongly disagree

7. I am comfortable expressing my emotions through text communication.

    Strongly agree

    Somewhat agree

    Neutral

    Somewhat disagree

    Strongly disagree

8. I am comfortable expressing my emotions through telephone communication.

    Strongly agree

    Somewhat agree

    Neutral

    Somewhat disagree

    Strongly disagree

9. I am comfortable expressing my emotions in face-to-face communication.

    Strongly agree

Somewhat agree

Neutral

Somewhat disagree

Strongly disagree

10. Do you feel it is easier to express your emotions through technological means versus face-to-face conversations?

Strongly agree

Somewhat agree

Neutral

Somewhat disagree

Strongly disagree

11. Does the use of internet communication take priority over in-person social activities?

Strongly agree

Somewhat agree

Neutral

Somewhat disagree

Strongly disagree

12. Do you frequently use emoticons (smiley faces) when communicating electronically?

Strongly agree

Somewhat agree

Neutral

Somewhat disagree

Strongly disagree

13. Do you notice when a friend has a change in their typing style over electronic communication?

Strongly agree

Somewhat agree

Neutral

Somewhat disagree

Strongly disagree

14. Do you notice when a friend has a change in their use of emoticons over electronic communication?

Strongly agree

Somewhat agree

Neutral

Somewhat disagree

Strongly disagree

15. Which emoticon expresses happiness the most?

^_^

:)

16. The following is an example of an internet conversation between Person A and Person B. Please answer to the best of your knowledge.

Person A: Hey, I found out I have a B average in our Psychology class.

Person B: Wow. You're smart.

    Person B is a making a negative remark about Person A's intelligence.

    Person B is making a positive remark about Person A's intelligence.

    Answer cannot be determined.

17. The following is an example of an internet conversation between Person A and Person B. Please answer to the best of your knowledge.

    Person A: Hey, did you see Sarah in class today?

    Person B: Yeah, she was sitting in front of me.

    Person A: She looked lovely as usual.

        Person A is stating that Sarah looked nice.

        Person A is stating that Sarah did not look nice.

        Answer cannot be determined.

18. The following is an example of an internet conversation between Person A and Person B. Please answer to the best of your knowledge.

    Person A: Hey, did you see Sarah in class today?

    Person B: Yeah, she was sitting in front of me.

    Person A: She looked *lovely* as usual.

        Person A is stating that Sarah looked nice.

        Person A is stating that Sarah did not look nice.

        Answer cannot be determined.

19. If you wish, please describe your opinions or personal stories regarding communication through technology.

Analysis

My survey was designed not as a comprehensive statistical assessment, but a probe into the general responses on specific topics discussed in my thesis. The survey was posted online through e-mail, Facebook, instant messaging, and online message boards. This allowed the responses to be given from pools of individuals with different ages and experiences. Some questions will not be discussed if they do not show significant responses but may be viewed in the attached sample survey. There was also a last question for respondents to optionally answer. This question asked to describe opinions or personal stories regarding communication through technology. Sixty-seven choose to answer this question and some key responses will be displayed in Appendix B.

To start, question number four asks: "What is your primary method of communication?" with results showing that instant messaging leads with 26.9% followed by face-to-face communication with 22.0%.

What is your primary method of communication?

- E-mail
- Other
- Instant Message
- Text
- Telephone
- Face-to-Face
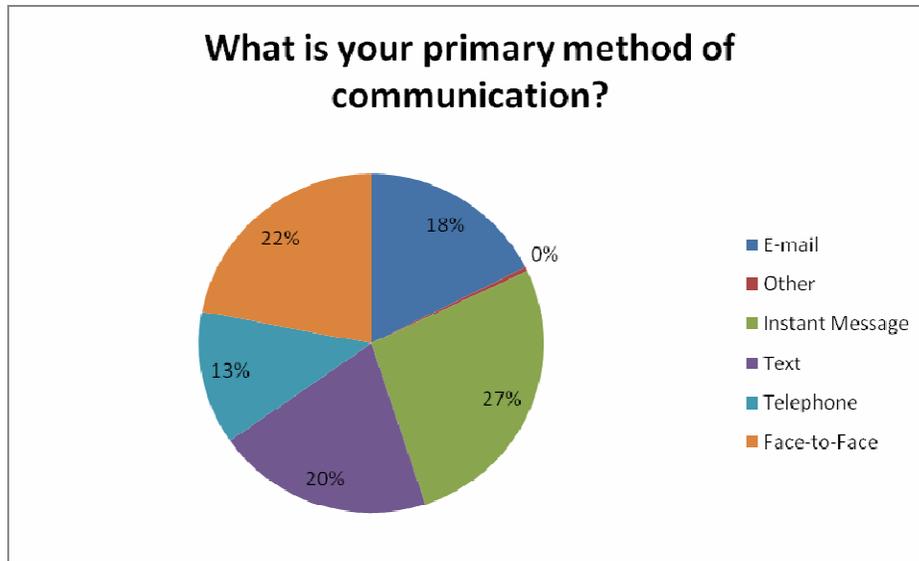
This result is only slightly surprising in that we are moving towards a more technology-orientated world where meeting with one another is no longer necessary. However, the high percentage of users with instant messaging as a *primary* method of communication warrants further attention. We could analyze that instant messaging provides users with the type of instant gratification knowing a user is online and at their computer. However, this should be carefully studied as learning patience is an integral part of maturity.

Questions five through eight ask how comfortable one is with expressing their emotions through e-mail, instant messaging, texting, telephone, and face-to-face communication. For most of the questions the responses seem un-informative with the highest percentages falling into the "somewhat agree" response category. However, question number nine asks if one is comfortable with expressing emotions in face-to-face communication. The highest percentage was 47.2% responding that they "strongly agree." I feel it is significant to note that this response rate is almost at 50% whereas questions five through eight have much lower responses in the "strongly agree" category.

We could conclude that most of the respondents feel more comfortable expressing emotions through face-to-face interactions as opposed to CMC.

Questions numbered twelve through fifteen deals with the use of emoticons in CMC. Number thirteen asks whether respondents notice when a friend has a change in their typing style over electronic communication. Surprisingly, 43.9% choose the "somewhat agree" category. Similarly, when asked in question number fourteen if respondents noticed when a friend has a change in their use of emotions over electronic communication, the highest percentage was 36.5% in "somewhat agree." These percentages are significant when discussing what is lost in translation over CMC. As discussed previously, when an individual knows a friend's typing style and use of emoticons, it is much easier to pick up on changes. However, these changes are not always noticeable and can be misleading between individuals who are not close or have just started communicating. Question number fifteen asks respondents which emoticon expresses happiness the most.
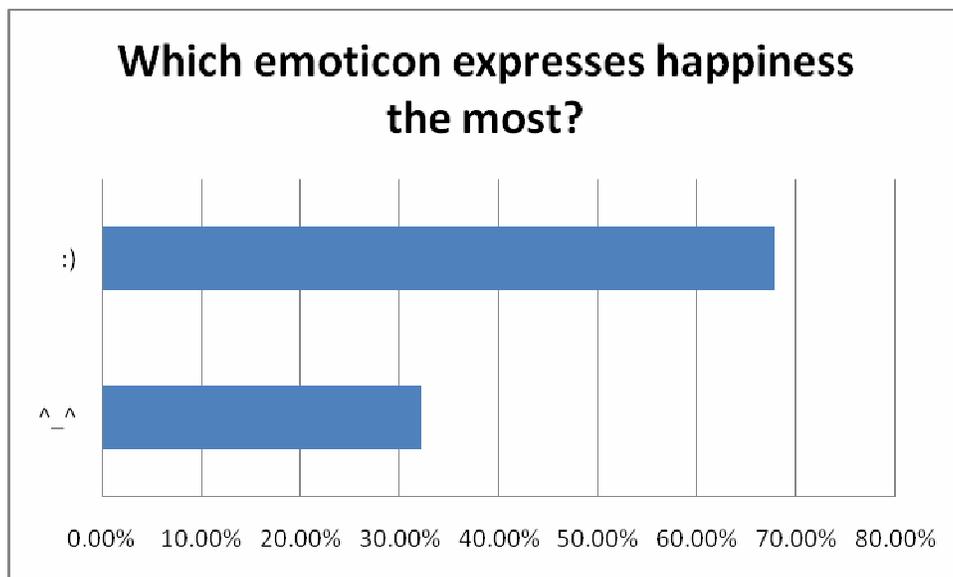
The results confirm the research done by Masaki Yuki showing that 67.8% choose the ":)" emoticon over the "^_^" emoticon. It is significant however, that 32.2% may be familiar with the Japanese-type emoticon. Cross-cultural influences are able to spread much more easily with the use of the Internet and CMC.

The questions numbered sixteen through eighteen are examples of internet conversations that I created in order to see if respondents could identify sarcasm. Sarcasm is identified as an element that is easily lost in translation in CMC and is confirmed by the following analysis. The first scenario is as follows:

Person A: Hey, I found out I have a B average in our Psychology class.

Person B: Wow. You're smart.

Person B is a making a negative remark about Person A's intelligence.

Person B is making a positive remark about Person A's intelligence.

Answer cannot be determined.

This question was designed to be sarcastically-ambiguous giving the respondents the option to choose if the answer cannot be determined. The question is made so that if person B feels that a B average in the Psychology class is good, the response of "you're smart" is not taken as sarcasm. However, if person B feels that a B average is not considered an achievement, the response could be taken as sarcasm. Respondents do not know the two people referred to as Person A or Person B which would make the answer seem difficult to determine. It is interesting to note that 30.3% and 22.5% were able to make a determination that either Person B was a making a negative remark about Person A's intelligence, or Person B was a making a positive remark about Person A's

intelligence. As expected, the highest percentage, 47.1% found that the answer could not be determined. The next two questions were linked and proposed a different scenario:

Person A: Hey, did you see Sarah in class today?

Person B: Yeah, she was sitting in front of me.

Person A: She looked lovely as usual.

Person A is stating that Sarah looked nice.

Person A is stating that Sarah did not look nice.

Answer cannot be determined.

Similar to question number sixteen, this question was designed to be ambiguous in regards to the sarcasm. Without any indication of sarcasm in CMC, it is difficult to know whether Person A is being sarcastic about Sarah looking nice or paying her a compliment. However, the results show that 57.1%, the highest response percentage, were able to make the determination that Person A was complimenting Sarah's looks.

Ambiguous Scenario

- Person A is stating that Sarah looked nice. — 57%
- Person A is stating that Sarah did not look nice. — 9%
- Answer cannot be determined. — 34%
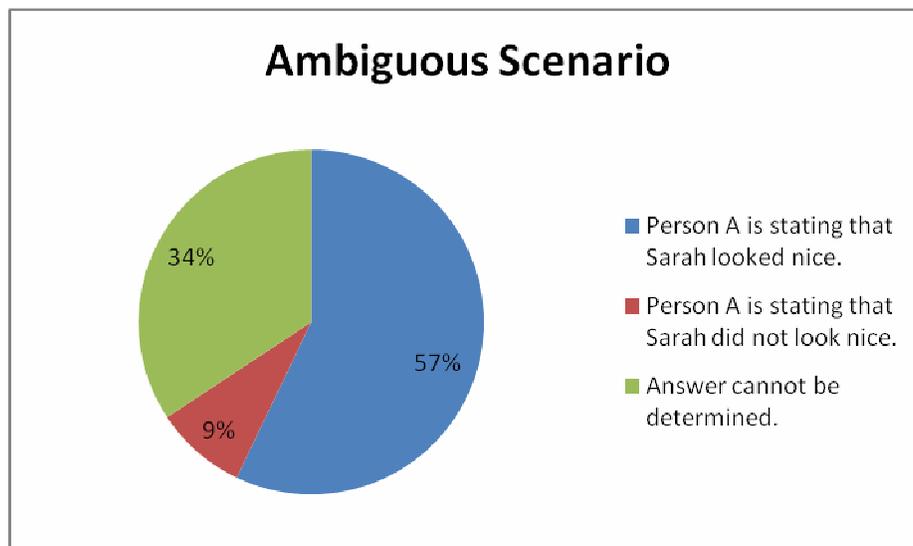
This is important to mention as the previous question was ambiguously designed but the majority could not make a determination. However, in the previous scenario the results were more closely distributed with 30.3% choosing the first answer and 22.5% choosing the second answer. It is interesting to see that for this scenario, while 57.1% choose the first response, only 8.6% choose the second response. These vastly different response percentages for two similar questions indicate that sarcasm in CMC can be misinterpreted very easily. For the last scenario, I choose to implicate sarcasm through italics which has been shown to be an indicator in CMC. The scenario is presented as follows:

Person A: Hey, did you see Sarah in class today?

Person B: Yeah, she was sitting in front of me.

Person A: She looked *lovely* as usual.

Person A is stating that Sarah looked nice.

Person A is stating that Sarah did not look nice.

Answer cannot be determined.

My results again are surprising showing that 55.7% saw the sarcasm, 22.0% did not and 22.4% found that the answer could not be determined.

Use of Italics

- Person A is stating that Sarah looked nice. — 22%
- Person A is stating that Sarah did not look nice. — 56%
- Answer cannot be determined. — 22%
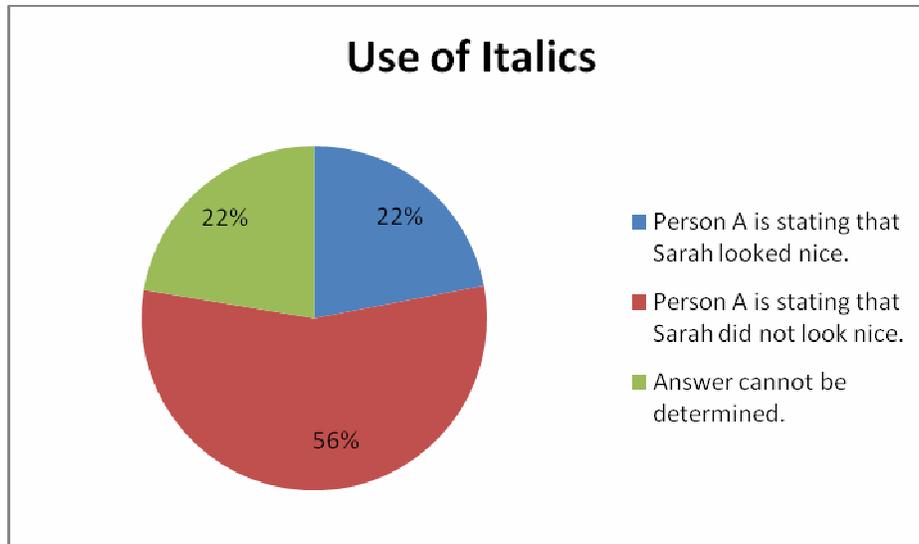
While slightly over half the respondents picked up on the sarcasm of this scenario, the other half did not or could not determine the answer. While the question could be subjective to the two people involved, I was expecting the italics to indicate that sarcasm was present. We can analyze that even with helpful indicators such as italics or emoticons, expressions such as sarcasm are not universally recognized in CMC.

Concluding Comments

It is my hope that this thesis brings to topic some issues and complications involved with CMC. It is important that we recognize and understand how we are communicating over the Internet and ways we can improve. Many of us who use sarcasm on a daily basis expect others to always grasp our meanings. However, as shown by my example conversation results, sarcasm can easily lead to misunderstandings. Emoticons also represent a gray area when it comes to CMC. While they provide a way for us to show emotions and expressions, they can also create further confusion when used with sarcasm or communicated cross-culturally. Lastly, the common trend of internet slang words brings about another way CMC can adapt and shift. The introduction of new slang words combined with ambiguous notions of sarcasm and scattered emoticons create conversations that are subjective to the users involved. With a society that is progressing towards less face-to-face communication, it is imperative that we are able to recognize when things we type can be lost in translation.

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Appendix A – Survey Responses

The last question was an optional question that allowed users to discuss opinions or personal stories regarding communication through technology. Some of these responses are significant and include:

"It takes a while to create a rapport with internet friends and until you do, you cannot be sure of their true feelings through mere words. Some people state their feelings while others state sarcasm. If I knew the people talking, I would better be able to make a decision about the meanings behind their words."

"I usually use "haha" after I make sarcastic statements just so the other person is clear that I am joking. I have started using skype, however, where you can see and speak to the person you are communicating with and I find that method far easier in understanding the other person's emotions."

"I was an English major in college, so I feel very comfortable using the written forms of communication. However, I know that I have personally misconstrued someone to be sarcastic when s/he wasn't and vice versa. Unless one is using emoticons and the like, it is difficult to tell what one is expressing. Because of my constant work with writing, I can easily notice a shift when someone's friend starts replying for my friend etc. Text messaging is the worst form of written communication, in my opinion, because of how limited your "character count" can be."

"I think there should be a font specifically for sarcasm. Or, at least a type of reverse italics where the text leans to the left, indicating facetiousness."

"Too many people communicate by non face-to-face means when they want to convey emotions because it is easier to tell someone how to feel without seeing their reaction (aka people are scared of seeing a negative reaction)."

"I think it is such a negative thing that technology has taken over face-to-face communication, and yet I am guilty of this myself. I think we all need to just go out to dinners and shops and museums, and discuss issues in person!"

"It is supposed to facilitate communication between people that cannot meet face to face for any reason. Unfortunately some have taken it as their primary way of communication, and it such an integral part of their lives that they act and have a different personality when they are communicating through instant message/chat etc. vs. face-to-face."

"Questions 16-18 are very difficult to answer because there are a lot of factors unaccounted for; the most major of these being that you get to understand a person's online communication in such a way that while you may have not been able to discern the meanings of the statements in 16-18 at first, you probably would be able to after talking to the person online for a while. Some people might be known to put a smiley at the end of a statement when they're actual being nice and leave it out if they were being sarcastic, or put an "lol" at the end of the

statement to indicate sarcasm and put nothing when being nice. The meaning of the statement relies greatly on your previous experience with the person's internet communications."

"The internet is just another medium of communication, and I find I usually don't get along with people who are bad at communicating through it. People who are boring or lacking emotions on the internet are typically uptight or shallow in person. Being able to detect or express emotions through text also indicates a greater intelligence, similar to understanding a work of literature or a keen psychological observation. Although the social rules of the internet are obviously different than in person, behavior online is always applicable to the real world, and is very telling of someone's personality."

Appendix B – Survey Results