# NONVERBAL COMMUNICATION ON THE NET: MITIGATING MISUNDERSTANDING THROUGH THE MANIPULATION OF TEXT AND USE OF IMAGES IN COMPUTER-MEDIATED COMMUNICATION

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# NONVERBAL COMMUNICATION ON THE NET: MITIGATING MISUNDERSTANDING THROUGH THE MANIPULATION OF TEXT AND USE OF IMAGES IN COMPUTER-MEDIATED COMMUNICATION

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#### Abstract

The disconnect between computer-mediated communication (CMC) and face-to-face (F2F) communication has been blamed on the absence of visual and physical nonverbal cues. As a result of the heavy lack of visual and physical interaction, previous research has deemed that F2F provides a richer environment for communication overall (Carter, 2003; Byron & Baldridge, 2005; Kruger J, Epley, Parker, & Ng, 2005; Kalman, Scissors, Gill, & Gergle, 2013). Despite some claims suggesting CMC will never be as fluid nor as rich as F2F (Carter, 2003; Byron & Baldridge, 2005; Kruger J, Epley, Parker, & Ng, 2005), communicating online through the use of various modes such as emoticons, nonverbal vocalizations, memes, stickers, kaomoji, color, and video are here to stay and only enrich CMC. Using a combination of the aforementioned modes, Internet users converse online using textual and visual means which resemble F2F nonverbal cues. Emoticons, nonverbal vocalization, and memes serve as substitutes for F2F nonverbal communication in CMC contexts. This body of work aims to analyze digital nonverbal cue use on Twitter by users of different languages.

*Keywords*: nonverbal communication, English, mitigation strategies, digital rhetoric, visual rhetoric, authorial intent, computer-mediated communication

This body of work is dedicated to my mother who not only suggested I study the underresearched topic of nonverbal communication online. She also has a better understanding of the topic than I do. I also dedicate this work to my dad who creates memes to post online daily. Acknowledgements

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#### **Chapter 1: Introduction**

An interesting phenomenon has already sprung up among the social media-immersed, Internet-fluent youth– intentional misuse of words, punctuation, capitalization, and grammar for the purpose of eliciting a specific feeling or response. Formalist researchers and instructors who belong to the current-traditionalist school of thought should not discount users' deliberate use of improper grammar as a lack of understanding of language, but instead a solid attempt at displaying feeling beyond what a standard, correct sentence could convey (Fulkerson, 1979; Berlin, 1982). Not always can we blame problems on the lack of proofreading. Misunderstanding and miscommunication between friends can happen online in many formats every day and often results in disastrous fallouts. Worse yet, misunderstanding easily occurs between employees and their bosses whether because associates sent out an email too soon, or a supervisor worded a phrase too harshly after a difficult morning.

Albert Mehrabian's (1971) 7-38-55 rule of personal communication continues to garner support in the present; nonverbal communication still reigns highest at 55% in communicating the most information while words alone convey the least at 7%. Voice and tone represent the remaining 38%. Because nonverbal cues drop off when converting to online contexts, online users have a higher risk of finding themselves in heated arguments over a misunderstanding (Kruger, Epley, Parker, & Ng, 2005). Previous studies regarding computer-mediated communication (CMC), defined as communicating through the means of a digital platform to transmit one's communication electronically, assumed that no form of CMC could perform any element of transactional communication superior, CMC is prone to fallouts (Carter, 2003; Kalman, Scissors, Gill, & Gergle 2013). Even when communicating F2F, examining nonverbal cues through Drs. Edward Hall's (1976) interpersonal communication theory and Geert

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Hofstede's (2010) cultural dimensions, nonverbal communication is not the same for everyone; it changes depending on the culture, context, and environment in which the authors and readers are encoding/decoding their messages. Online context, in this instance, changes little since the rhetorical moment depends on culture, language, situation, and conversation. Visual digital nonverbal cues, however, may reach across language and cultural barriers to transmit meaning which can be understood by users who see the subtext (Pflug, 2011). Utilizing digital nonverbal cues like emoticons (e.g. :3), nonverbal vocalizations (e.g. "woohoo!"), and memes (e.g. "one does not simply walk into Mordor") could potentially mitigate a potential misunderstanding, providing additional context to a complex conversation, even across diverse languages and cultures (Riordan & Kreuz, 2010; Pflug, 2011; Yuasa, Saito, & Mukawa, 2011; Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer 2017; Riordan & Trichtinger, 2017; Hitt; 2018). For example and depending on the rhetorical situation again, using pictures, emoji, emoticons, memes, or stickers in lieu of words which users understand share the same meaning cross-culturally helps users communicate with one another without the fear of misunderstanding. A good example of this is a smiley face.

#### **Cultural Dimensions and Visual Rhetoric**

The online social media networking micro-blogging platform Twitter, due to its restrictive 280-character limit, has given way for the generous use of the aforementioned digital nonverbal cues to not only enhance language, but to also expand on the little space given. Despite the restrictive space given, posters take advantage of the multimedia sharing capabilities Twitter offers to its users to make use of the character restrictions. Using multimedia such as visual nonverbal cues may communicate messages more efficiently in smaller spaces. Little research has been done to understand more about the rhetorical implications between Twitter's userbase and the widespread usage of digital nonverbal cues. To incorporate interests within the field of rhetoric and composition itself (outside communication), the section focusing on the analysis of Twitter conversations will be assessed through Kenneth Burke's Pentad, in which the heuristic will analyze the motivators behind the use of digital nonverbal cues on the microblogging platform (Fox, 2002). Burke's Pentad will potentially provide a suitable heuristic to better understand and interpret Internet users' motivation to use digital nonverbal cues as opposed to alphanumeric text alone. The primary motivation behind using Burke's Pentad to analyze users' activity on Twitter is to better understand how to communicate cross-culturally in an age which prioritizes an increasingly globalized community connected by the Internet.

Many different terms will be defined and used throughout this body of work as they appear, but a glossary will be provided at the end of the work for the readers' convenience. Terms such as computer-mediated communication (CMC), conversation which occurs in a digital context, will be explained more thoroughly in this space.

#### **Purpose of the Study**

This study intends to establish the relationship(s) between digital nonverbal communication used online and the messages users transmit to one another. In doing so, the study also intends to define, through the literature review, how different modes of communication affect the nature of CMC. While the literature review will primarily be viewed through the cultural dimensions theory as determined by Drs. Edward Hall and Geert Hofstede, a primarily international/intercultural communicational approach to the project, the secondary portion of the project will be viewed through Kenneth Burke's Pentad (1945), focusing on the agency of information which passes through the Internet (Hall, 1959; Hall, 1989; Bizzell & Herzberg, 2001; Hofstede, 2011). The interface of interest is chiefly Twitter.

Twitter was chosen as the primary research interest due to its lack of academic research in the field of rhetoric despite it frequently being the place where scholars and students alike meet to share ideas and reference the news for current events. To be more specific and while Twitter has been rhetorically analyzed with regard to social activism, political campaigns, popular culture, and the maximization of one's message in as few characters as possible, little research has been done on the front of its rich viability for digital nonverbal communication. In the field of rhetoric itself, the Council of Writing Program Administrators (WPA) has referenced to Twitter as a viable platform outside the use of social media for communicating communitybased writing, activism, and social issues beyond the lens of popular news-network broadcast.

A similar study using protocol which was comparable to the one used in the methodology section of this research was featured in the 19.3 edition of Topoi on Kairos in May 2015. In the study, the researcher archived tweets which utilized the name "Springsteen" (Bruce Springsteen's surname) between February 2012 and October 2013 in order to track communication with regard to a specific tour featuring the artist and the touring band (Wolff, 2015). The study presents an opportunity for Twitter and its content to be researched and studied for its users' agency (in the sense of Kenneth Burke's Pentad) in addition to the different types of writing and communication with which its users are engaged. In the case of the study mentioned, fan studies are at the heart of the research. To explain fan studies further, it is the study of a particular popular franchise or actor (that is, person, place, or thing) to determine its importance in popular culture. For the purpose of this study, however, the mitigation of miscommunication and overall enhancement of online communication will be discussed with Twitter in mind.

#### **Research Question/Hypothesis**

1. How can we improve online or non-face-to-face communication?

The aforementioned question takes into account that CMC may not be quite as rich as F2F, considering the physical element of proximity has been removed from context. Because this research focuses primarily on the improvement of communication via nonverbal

communicational cues used in CMC, the improvement of F2F will not be included in the literature review, nor the subsequent content analysis.

# 2. How do Twitter users of different languages utilize non-verbal cues? (this is the primary research question)

It should be noted that both the literature review and subsequent chapters of research focus primarily on the aforementioned question above.

#### **Chapter 2: Literature Review**

While most of the literature review will be analyzed through the means of a framework utilized primarily in intercultural and international communication disciplines, it should be noted that the content analysis will be analyzed through a framework used in visual rhetoric. Broadly speaking, the literature review will analyze digital nonverbal cues through cultural dimensions put together by communication scholars and researchers Edward Hall and Geert Hofstede. Edward Hall (1959) named the four dimensions of culture as following binaries: individualism (versus collectivism), masculinity (versus femininity), power distance (in reference to high- and low-power distance), and uncertainty avoidance (in reference to high-and low-uncertainty avoidance. Including Hall's four dimensions of culture– the power distance index, individualism versus collectivism, the uncertainty avoidance index, and masculinity versus femininity, all definitions which can be read in "Hall's four dimensions of culture," Geert Hofstede (2011) added two more dimensions to the theory– long-term orientation versus short-term orientation and indulgence versus restraint.

Because goal orientation and indulgence versus restraint is not addressed in the literature review and does not appear in the content analysis, it will be explained here. Long-term orientation cultures prioritize goals which will benefit individuals or groups in the long-term (like careers and retirement), rather than ones which prioritize short-term goals, goals which include can be achieved in a few days and only benefit the individual or group for a short time (some competitions and vacations). Indulgence culture refers to a high degree of freedom given to its people to enjoy life and satisfy human craving. Restraint culture, its binary, places a high control on satisfaction in daily life and limits the amount of freedom a person has to craving and gratification. View Table 1 on the following page to see the cultural dimensions at a glance. Table 1.

Cultural almensions explained	Cultural	dimensions	explained
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Dimension	Criteria	Nations
High-context	Implicit; saturated by nonverbal expression	South Korea
Low-context	Explicit; saturated by verbal expression	Germany
Individualism	Prioritizes individual goals	United States
Collectivism	Prioritizes group, family, company goals	Guatemala
High-power distance	Little control in politics	Malaysia
Low-power distance	More control in politics	Austria
High-uncertainty avoidance	More hesitance to try new things	Greece
Low-uncertainty avoidance	Less hesitance to try new things	Singapore
Masculinity	Direct, bold style	Japan
Femininity	Soft, discrete, gentle style	Sweden
Long-term orientation	Long-term goals; prioritize	China
Short-term orientation	Short-term goals; prioritize the moment	Norway
Indulgence	Focus on human pleasure	Mexico
Restraint	Controlled satisfaction	Ukraine
Monochronic	Punctual; one task at a time	Finland
Polychronic	Less punctual; multitask	Saudi Arabia

Outside the cultural dimensions, the literature review will be split in to four sections starting with communication viewed through intercultural theories, moving into different types of nonverbal communication with a focus on its digital counterpart viewed through visual rhetoric, continuing into types of computer-mediated communication, and finishing with how all these aforementioned components improve digital communication overall, again, through visual rhetoric.

#### **Communicating through Cultural Dimensions**

People's communicational styles are influenced by several factors– most intensely by the regions in which they live and the cultures around which they communicate. The aforementioned cultural dimensions define the type of communication tactic people use, even online. Both Edward Hall (1959 & 1976) and Geert Hofstede (2011) define communication along a spectrum of culture consisting of ten factors which dictate how and why people communicate the way they do, which permeates communication styles across all contexts. For this project, Hall's (1976) information speed, and high- versus low-context in addition to Hofstede's (2011) individualism/collectivism and short/long-term goal orientation are central to determining how users communicate online. Other factors such as uncertainty avoidance and masculinity versus femininity may also appear within the research.

Before diving into how the cultural dimensions operate in the research proper, it is important to define what they are and explain how the dimensions operate in online contexts. The following dimensions to be discussed consist of Edward Hall's (1976) information speed, Hall's high- and low-context cultural index, Geert Hofstede's (2011) individualistic and collectivistic dimension, and Hofstede's uncertainty avoidance index. Hall's (1976) dimension of information speed determines how quickly or slowly people respond to a message another user sends.

The speed with which a particular message can be decoded and acted on is an important characteristic of human communication. There are fast and slow messages. A headline or cartoon, for example, is fast; the meaning that one extracts from books or art is slow (Hall & Hall, 1990, p. 4).

The perceived speed at which a person responds, while existing in the same cultural dimension, is another factor which determines the recipient's perception of the responder. A familiar visual

cue of this phenomenon is the image of the three dots which appears in many messaging or chat apps like Messenger when someone is typing a comment as seen in Figure 1. A timestamp such as "delivered (Figure 2)" or "seen" are a couple of other cues signifying the dimension of time and often subsequent frustration when a read message has not yet been responded to.

*Figure 1*. Three dots displayed as responder is typing a message.

*Figure 2.* "Delivered" stamp signifying the message successfully reached the recipient.

Riaht

Delivered

Hofstede's (2011) dimension of individualism and collectivism operates much like a cultural binary. Functioning as a binary, collectivistic cultures like those in the geographic east such as South Korea value working together in addition to attaining group goals as opposed to individual achievements valued in cultures situated in the geographic west like the United States and Germany. Rather than operating as a binary like collectivist and individualist, long-term and short-term cultures are scored as an index since all people have some combination of long-term and short-term goals.

However, Japan and Korea rank higher on the list as long-term-oriented countries whereas the United States and Germany fall lower on the index as short-term oriented countries. Hofstede's (1980; 2011) uncertainty avoidance factor determines how willing a person is to participate in something with which he or she is unfamiliar. The more eager people are to participate, the lower their uncertainty avoidance factors are as opposed to when they are less willing to participate, and their uncertainty avoidance factors are higher. In a similar theory, uncertainty reduction theory, people aim to collect as much information about one another as possible in order to reduce the amount of uncertainty or ambiguity between one another (Berger & Calabrese, 1975). By reducing uncertainty, it is thought that the parties involved will become more comfortable in the rhetorical situation. The aforementioned cultural dimensions of communication shape people's style and perception of communicating in-person and online.

Like uncertainty avoidance and reduction, the dimension of high- and low-context culture also operates on an indexed scale, as cultures may operate in both high- and low-context situations simultaneously. A close-to-home example of high-context culture exists no farther than the local mall– the infamous Apple Store. Taking in consideration the Apple Store for a moment, a person who has visited the store before might report many clear differences from the average brick-and-mortar store in the United States. First, all electronics are set on rows of tables within easy-reach of customers who wish to peruse the products. Second, the tables have chairs. Third, the staff wear nearly-inconspicuous uniforms, blending in with their clientele. Fourth, and most remarkably, there is no register nor front/back desk present. First-time visitors to the store have a high chance of experiencing some form of culture-shock, having not yet experienced the high-context culture required to operate within the Apple Store. Previous visitors have the advantage, understanding how the store operates before entering, and knowing what sort of business they'd like to take care of before walking in.

Like suggested by describing the experience shared between the two types of customers who walk into an Apple Store, high-context culture is knowing a high volume of information prior to communication; in cultures which operate within high-context situations, less information is exchanged by words. Examples of countries which exist within high-context cultures follow: South Korea, Brazil, Greece, Saudi Arabia, and the Southern United States (Würtz, 2005; Nishimura, Nevgi, & Tella, 2008). The hallmark of high-context cultures is often the tight-knit personal networks made between family members and friends both in-person and online. Interaction with strangers is minimal. On the other hand, low-context cultures require explicit transaction of information via verbal cues. Low-context cultures include: The Northern United States, Germany, Finland, The Netherlands, and Australia. Japan, like the United States, exists in both high- and low-context communicational cultures. Low-context communities generally enjoy good professional relationships but fewer close relationships, and relationships sustained between family members may not be as close. Due to the nature of low-context communication, however, users who live within low-context cultures tend to divulge more information online than their high-context counterparts (Choi, Im, & Hofstede, 2016); low-context communication requires the exchange of more words/text, after all (Hall, 1959; Hall, 1976). While low-context communicators may use more verbal and written communication than high-context communicators overall, that does not necessarily mean misunderstanding cannot occur. Instead, there is still the element of language barrier. However, elements stemming from telecommunication media may bridge the gap between the two cultures to mitigate the misunderstanding.

Marshall McLuhan (1969), aside from his famous description of communication being that the medium is the message, noted that telecommunication media is evaluated along a warm and cold spectrum (Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017). How instructors interact with students in each area, for example, changes how students view them. Warmer and richer media included audio and visual messages whereas cold media included text-based communication. Cold media can still be made meaningful and expressive by conveying a variety of emotion by adding emoji and emoticons, thus adding nonverbal elements. Using such cold media, especially on social media platforms like Twitter, is a rhetorical choice made by its users who have chosen to use the cold media as opposed to the warm media. Tone sets emotion, whether the instructor will be cold or expressive/caring, based on the aforementioned study. Tone should be set purposely and carefully. Textual paralanguage cues (TPC) can provide more emotional context, strengthen the impact of typed message and be used for disambiguation (Rodríguez-Hidalgo, Tan, & Verlegh, 2017). TPC (nonverbal communication online not limited to emoticons which may also include nonverbal vocalizations, words in all caps, colorized words, and bolded/italicized/underlined words) are not as ambiguous as studies limited to sending and receiving emails alone (Byron, & Baldridge, 2005; Kruger, Epley, Parker, & Ng, 2005). The researchers go on to explain how TPCs can be used to simulate nonverbal communication from face-to-face conditions online. Even though people vent through ranting in blocks of text, often copiously and overusing the caps-lock button, it has been argued that the act of venting is a TPC (Rodríguez-Hidalgo, Tan, & Verlegh, 2017). Whether people consciously look for negativity or not, users are subconsciously trained to process negative content more quickly than positive content (Riordan, & Trichtinger, 2017). Venting is another such case when people can express emotion through outbursts (while not necessarily a positive use of TPC).

Venting might be an example of a user communicating from a low-context culture lens (Hall 1976; Rodríguez-Hidalgo, Tan, & Verlegh, 2017); "the frequency or intensity of usage of TPC reported in recent studies has ranged from .6% per word in email messages (Kalman & Gergle, 2014), to .95% per word in a German chat corpus" (Rodríguez-Hidalgo, Tan, & Verlegh, 2017, p. 639; Vandergriff, 2013). As explained previously, people from low-context communities require more verbal information to understand the context of the situation and are more prone to provide more words (often in the form of blocks of text) to explain their circumstances (Pflug, 2011). High-context transactions, on the other hand, transmit minimal information as people from these communities already know much of the context prior to communication. In general, nations in the geographic east such as India and Vietnam exist within high-context swhereas those in the west like Germany and the Northern United States operate in low-context cultures (Würtz, 2005; Nishimura, Nevgi, & Tella, 2008). Unsurprisingly, people within high-context cultures tend to speak about personal matters within private networks such as direct/private messages rather than in public spaces. Supporting this, Asian cultures are typically more collectivistic than western ones, which are seen as more individualistic (Hall, 1976; Hofstede, 2011). Because the information is not readily available and many people are not willing to disclose the information in profiles, a range of demographics disappear when communicating on forums such as race, age, gender, and appearance.

The aforementioned cultural factors are not often immediately apparent but knowing more about how people from high- and low-context communities communicate with one another helps provide more understanding with regard to how the two communities interact online. Lowcontext communication takes the following aspects into consideration: direct, verbal, distance, logic, explicit, loose personal networks. In contrast, high-context communication requires the following qualities: indirect, implicit, less structured, nonverbal, social background is important to interpret messages, tight personal networks. Regardless of high/low-context, people tend to disclose more information online than in face to face contexts. The amount of personal information disclosed may depend on what kind of context culture they come from, however. Mobile devices, while introduced as literacy tools which provide gateways to reading and composition, a very fashion-forward way of thinking, have been a primary means through which people communicate with one another, regardless of cultural context (Mapes & Hea, 2018). A longitudinal study of student writers finished in Fall 2016 focusing on mobile writing and the ecology of users' relationship with their devices describes a five-year longitudinal study of student writers at the University of Arizona featuring mobile writers' lives. The study mentions "millennials" as being the target age group signaling that being a mobile writer promises people of evolving identities, cultural included (p. 74). Mobile devices served as a tool to create discourse much like the traditional pen and paper.

#### **Types of Nonverbal Communication Viewed Through Visual Rhetoric**

People bear an emotional attachment to the devices, going as far as to suggest that they have a "relationship" with smartphones (Mapes & Hea, 2018). Just like any other relationship, people bear various emotions towards their smartphones, ranging from anger to happiness. Surprisingly, younger people are more likely to feel stronger emotions, one way or another, including anger while mature audiences experienced milder feelings towards smartphones.). The five-year longitudinal study focusing on mobile writing and the ecology of users' relationship with their devices might be trying to convey that the personal narrative (of the writer and the device) is what it means to be a mobile writer. The smartphone can also be considered an extension of users' bodies into the digital world facilitating constant connection with others (non-face-to-face). Mobile phones are so embedded in people's lives that their interactions are defined by them, articulated by the strong relationships between themselves and their devices.

In the longitudinal study of student writers, 18 students were asked to rate various social media platforms in what they considered to be writing and what they did not consider to be writing on a Likert Scale (from 1 to 10). Blogging received the highest score while online chatting received the lowest score. Achieving mobility when taking notes, researching, reading, writing assignments, reviewing or proofreading, editing, storing assignments was an important factor to the participants in the study. Collaborating with people, assigning tasks to team members, maintaining professional relationships, maintaining personal relationships, also held importance to participants in the study. The professional and personal relationship maintenance emerged as a strong reason why students prefer to use smartphones for school. Students had identified with smartphones as a statement of status, but their near-constant use of the devices on an hourly basis provides an interesting ground for research. Also interesting is the devices' capability to input nonverbal communicational cues almost as seamlessly as text in the form of

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immediacy behaviors, which include nonverbal actions signifying emotional availability and psychological proximity.

Nonverbal communication immediacy behaviors may include the following: emoticons and emoji, figurative language, response latency, color, imagery, animated gifs, memes, and stickers. Turning to digital nonverbal immediacy uses in the classroom, the study focused on online students' engagement based on virtual instructors' uses of varied nonverbal cues describes another dimension, online classroom environments, by adding the following cues to nonverbal communication immediacy behaviors: cohesion, audio, length of the message, time of day, message frequency, and type/promptness of feedback (Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017, p. 37). Nonverbal cues—expressions of emotion— are nearly universal among ages, sexes, races, and cultures (Carter, 2003; McPartland, 2013). The words and grammar a person chooses also demonstrate a nonverbal quality. Intonation of voice, while not always interculturally universal, also demonstrates a nonverbal cue to the receiver of the message (Carter, 2003). Because social networking systems (SNS) are relatively new, little research has been done to determine how two or more cultures communicate online and whether misunderstanding occurs based on cultural differences.

The study addressed focused on small-group collaboration in Twitter through crosscultural analysis analyzed two countries' interaction on Twitter– United States and South Korea (Choi, Im, & Hofstede, 2016). The two cultures differ the most in Hofstede's (2011) Cultural Dimensions of individualism versus collectivism and short-term versus long-term goal orientation. The way Twitter is used by people around the world greatly varies depending on who is using the social network service. For example, people from individualistic countries like Germany and the United States predictably communicate more with strangers while those from collectivistic countries like Japan and India prefer to fortify bonds with people they already know (Choi, Im, & Hofstede, 2016; Garcia-Gavilanes, Quercia, & Jaimes, 2013). People from individualistic countries prefer using horizontal "mouth-oriented" emoticons like this: : ) whereas collectivist countries tend to use vertical "eye-oriented" like this: ( $^_$ ). The communication pattern reflects the higher importance of nonverbal communication in higher-context cultures like India, whose people prefer communicating deeper conversations with people they already know, referencing Edward Hall (1976) as to what defines high-context information as opposed to low-context information (Pflug, 2018). Despite the difference in preference between the two types of uses of emoticons, the two types are generally understood by most cultures. As such, the emoticons, in both usages, are good uses in place of text when two or more different languages are being used.

Returning of the focus of the Twitter study which analyzed the collaboration of users from high- and low-context communities, positive and negative answers are expressiveintegrative and are concerned with the social process rather than the content of the assignment (Choi, Im, & Hofstede, 2016). Attempted answers and questions, while related to the assignment, may be affected by social contexts, rather than the assignment itself. Over 75% of Twitter's active users access Twitter through the means of a mobile device, potentially affecting the rate and quality of responses (Choi, Im, & Hofstede, 2016; Mapes & Hea, 2018). I also accessed Twitter via a mobile device for my study to see how using a mobile device would affect the appearance of the tweets I recorded for the purpose of the content analysis.

Culture determines the communicative acts a person takes which affect the group's outcomes. Within the study observing how users from the United States and South Korea interact online, it was expected that users from the United States will engage in more direct and open communication, unafraid to share new ideas and opinions, thus scoring low on Hofstede's (2011) uncertainty avoidance index. From a rhetorical perspective, agents from both high- and low-

context cultures may be persuaded to communicate with one another using nonverbal cues to interact through persuasive acts (Bizzel & Herzberg 2001). Existing in a low-context society, users from the United States rely more on textual communication in addition to verbal communication while relying less on nonverbal messages. Koreans, on the other hand, utilize more nonverbal communicational techniques which are more indirect than those used by the users from the United States, appealing to high-context and feminine-style communication qualities. Regarding South Korean communicational-styles, its emphasis placed on hierarchal and long-term relationships determines how users communicate and share ideas with one another as a shared responsibility. New ideas are not always welcome, but the use of nonverbal communicational cues helps streamline computer-mediated communication (CMC).

Using visual imagery helps people learn more about one another as a common ground. Visual imagery, alluded to earlier, can include any or a combination of the following: images, memes, animated gifs, stickers, emojis, and emoticons. The lack of communication sends a message as well, whether intended or not. Not responding to messages right away (or at all) may not send the message the user wants. Instead, it may send the message that the recipient is not a priority. To reiterate: not sending a message or hesitating is a message itself in time latency (Hall, 1976). More-developed nonverbal CMC, including a faster response rate, leads to more motivation and richer communication in general. Rich nonverbal communication not only benefits users in SNS contexts, but also those who participate in online classes.

Returning to the study which focused on online learning through students' engagement based on instructors' use of nonverbal immediacy cues, the study consisted of 178 participants from a variety of online courses from Midwestern universities (Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017). Online courses were from different disciplines such as English, mathematics, science, and the arts. The students were in different stages of their academic careers from first year to graduate-level. Not all participants completed all the questions, but the average response rate was 19%. The courses were tested for various nonverbal behavior frequencies such as color, audio, video, and time latency. The overall findings follow: immediacy helps create instructor social presence, increasing student engagement. Each category (choice of medium) varied depending upon the instructor.

Students expressed through the study that online nonverbal communication consisted of conveying emotion through Textual paralanguage cues (TPC), sending meaningful messages, whether containing images or not, and being timely. Interactivity depended on the element of immediacy behaviors (responding to messages in a timely manner), responding to and giving feedback to students in a pleasant manner, and appropriate message length. In the event that video, audio, the manipulation of color, or other functions are not available, students found the use of emoticons especially fruitful when instructors actively connected with students on an interpersonal level online when expressing emotion and avoiding misunderstanding (Derks, Bos, & Von Grumbkow, 2008; Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017). So long as there is a common ground and language established in the classroom, students will understand the language used by the instructor in text or nonverbal TPC form. Emoticons used in email and chat only have a few of the emotions which humans can display yet they can convey emotions to many people. Using emoticons, even in the absence of text, can be an effective way to deliver feedback through emotional enhancement.

Also used in educational contexts, avatars can also be used by people to represent themselves which also makes communicating online more enjoyable and effective in different contexts (Allmendinger, 2010; Yuasa, Saito, & Mukawa, 2011). People can also use emotion words to convey how they are feeling in addition to words which invoke visuals (smile, frown, etc). Another worthy addition to nonverbal communicational cues is the advent of *kaomoji*, something which used to be unique to Japan but is now used worldwide. Like the eye-oriented text-generated images explained earlier, *kaomoji* is Japanese for "face character" (顏文字), and makes use of the extended interface of keyboards, integrating multiple Unicode or two-byte characters to make faces.

Manipulated language also shapes the perceptions of readers; varied fonts (*Great idea*), punctuation (Great idea!!!), capitalization (GREAT IDEA), and nonverbal vocalization (greaaaat idea) help express emotion. Varied fonts may also come in the form of non-traditional fonts used instead of the orthodox Arial, Courier, Helvetica, and Times New Roman. Other fonts may include Comic Sans, Curlz, Old English, and Rosewood (a script reminiscent of font used in the "Old West"). Instructors can use figurative language and nonverbalized vocalization to create immediacy and presence even in cold media when other means are unavailable (McLuhan, 1969; Epp, Green, Rahman, & Weaver, 2010; Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017). As alluded to earlier, the used of various TPC and nonverbal cues in online contexts has shown to boost students' relationships between their peers and instructors in addition to their engagement with assignments. Adding more color, emoticons, and personalization to online classroom environments may help support a positive impact on students' performance and attitudes towards classroom involvement.

Research on the topic before the advent of the smartphone suggests that nonverbal communicational cues can absolutely not be transmitted through CMC (Carter, 2003), but more recent research continually insists otherwise (Riordan, & Kreuz, 2010). Five corpora were analyzed in a study with regard to how users interact when communicating through blogs presented a description of how people express emotion online different categories of nonverbal communication in CMC and shows examples of them being used in different contexts. Five different categories of nonverbal communication were identified in the study: nonverbal

vocalization (vocal spelling), lexical surrogates (nonverbal "sounds"), spatial arrays (emoticons like :-)), manipulation of grammar markers (!!! used to express surprise), and minus features (the lack of capitalization of proper nouns or the beginning of the first word of the sentence). Five corpora were examined for vocal spelling, emoticons, and the manipulation of several forms of punctuation: repeating exclamation points and question marks, angled brackets, curly braces, asterisks, underscores, tildes, and capitalized words. A variety of different dates and measures were used to determine the answers to the above research questions. Capitalized words were among the most frequently used. 0.35% of all words. Verbs and pronouns were among the words most frequently capitalized (e.g. SHE is the one who DROVE the car, not HIM). Vocal spelling and the repetition of letters occurred for only 0.02% of the words. Repeating punctuation was used quite a bit; repeating exclamation points occurred 0.44% of the time. Emoticons made up for 0.39% of all punctuation across all data sets. While this study did not specifically analyze Facebook content, Facebook likes and reactions also constitute as nonverbal communicational cues since some Facebook users do very little content generation on their while the bulk of their activity is summarized by interacting with other users by manipulating the like function.

In addition to being recognized as a form of nonverbal communication online, Facebook likes are protected by the first amendment as an expression of free speech (McPartland, 2013). While a like can be considered a symbol of genuine appreciation of one's content, likes are similar to nods but can be also considered hearsay in some legal jurisdictions. Furthermore, likes, which were originally not considered an independent comment of their own, could stand in court as a "comment" of hearsay, further suggesting that nonverbal communication online, similar to the Facebook like, is "speech." The study which focused on the relationship between Facebook likes in conjunction with other digital nonverbal cues under federal evidence gave a summary of what a like is according to the date written and remains up to date in general, despite the advent

of Facebook reactions, which was not available at the time when the article was written. This reaction system offers a different sort of emoji for the liking system now in addition to the traditional "thumbs up" icon. The article further explains why people "like" things for which there are many supporting reasons, all which still remain true today. A like supports hearsay but must be supplemented by other criteria such as a statement of assertion. Some courts think that a like alone, however, is a sign of assertion while others (like Virginia) do not. In Virginia and without verbal statements, "likes" warrant no first amendment protection, contrary to what the article mentioned in the beginning. While Facebook and Twitter are two different entities, the act of loving or retweeting tweets may have the potential of making more than a personal statement, leading to legal implications (Abramson, 2017). Nevertheless, Facebook agrees that liking content is a form of communication. Likes may constitute as the creation of an individual statement which may be a precursor to the advent of "reactions," Facebook's new like system. The simplicity of clicking one's way to convey a thought may be a manipulation of a digital multimodal nonverbal cue– an image which references a name and context referring to the meaning of the reaction.

Multimodal texts represent opportunities to construct arguments in unusual ways. Multimodality, or multiliteracy, as The New London Group (1996) calls it, encapsulates a variety of literacies in different contexts in which students are immersed. Communicating online, especially on microblogging sites like Twitter, aid users to converse multimodally quite easily by allowing users to upload multimedia. Combining textual, visual, spatial, aural, and behavioral techniques into composition with traditional pedagogical formats (physical teaching environments, for example) helps augment performance among communicators. Relating to local and global connectedness, multiliteracy in the form of using multimodal communicational tools assist to bridge communication gaps cross-culturally. Arguments in the form of multimodal texts online act as supplements for face-to-face nonverbal communication. Videos offer multimodal spaces for the expression of "non-normative expressions of rhetoricity," an alternative mode of communicating without the use of text; visual communication online communicates more than words alone (Hitt, 2018, p. 176). The analysis and study focused on non-normative rhetoricity defined non-normative expression as rhetoricity processed through mental disability and madness. To explain this further, visual rhetoric in the form of nonverbal communicational cues used online like memes, videos, audios, and animated gifs help non-normative and non-neurotypical individuals find easier and more expressive ways to communicate with other users online. The element of time in the form of time latency may aid the ease of communicating and support positive perceptions of one another.

People who respond quickly to conversations make conversations feel like they have a flow to it, making colleagues seem more attentive, prepared, or decisive (Hall, 1976; Kalman, Scissors, Gill, & Gergle, 2013). When conversations are delayed by longer pauses, people can feel like they said something wrong or that there might be technical delays. Forming assumptions about an individual's personality based on chronemics (punctuality of response and consistency with conversation) alone can be unreliable. The only way to form a relationship between extroversion and fast response time is to determine whether people with extroverted personalities are prone to avoid long pauses in conversations, which also takes into consideration uncertainty reduction. The primary nonverbal cue addressed in a study focused on the relationship between online chronemics and social information is the element of chromatics focusing on the response time in CMC messaging (Kalman, Scissors, Gill, & Gergle, 2013). Personality traits seem to influence response rate and words chosen in CMC. People who scored high on conscientiousness and agreeableness performed better in jobs involving interpersonal interactions. Extroverts tend to use a greater number of words as opposed to introverts who use fewer words. A delay from a high-status person was viewed more positively than a delay from someone of lower status (power distance). Chromatics and trust: the longer the pause, the more deceptive the replier seems to the respondent. The study focused on chronemic research involving time-related messages included 124 participants at a Midwestern university. A personality questionnaire was included. Extroverted individuals not only used more words in their messages, but they also responded quicker. There was a relationship established between trust and time. Longer pauses made hinted that the messenger was being deceptive.

#### **Types of Computer-Mediated Communication**

Users have traditionally used large desktop computers to handle digital communication, but a myriad of different devices are used today such as laptop computers, netbooks (Chromebooks®, iPads®, smartphones, and tablets). In addition to using the aforementioned devices to transmit messages digitally, people use various platforms to communicate such as text messaging, email, social network systems (SNS), forums, blogs, online classrooms, and many other places. "CMC accounts for nearly one quarter of the total time spent online, and almost 83% of Internet users report using social networking sites" (Casale et al, 2015, p. 187). CMC is an important part of daily life today which will only continue to establish its role in people's lives moving forward. Text-based CMC alone lacks face-to-face (F2F) elements of nonverbal communication including intonation, pitch, expressions, physical contact, and gestures (Kalman, Scissors, Gill, & Gergle, 2013; Carter, 2003). The norms of communication and personal interaction are static but the means by which this information is transmitted change daily and are dynamic. Personal information which would not normally be transmitted through words can be gleaned from expressions, or nonverbal cues. This element is often lost when the F2F element is taken away in CMC when screens separate people from one another (Carter, 2003). Furthermore, the primary mode examined was email communication rather than additional forms of online

social contact. Earlier research says that CMC does not make up for the richness of communicating F2F (Carter, 2003), but later research notes that some nonverbal research such as chronemic cues exist to enrichen digital communication, offering back to Hall's (1976) cultural dimension of time as alluded to earlier in the sub-chapter on communication (Ledbetter, 2008). Time itself serves as a digital nonverbal communicational cue.

Because timestamps appear on messages which indicate when emails were sent, reply rate is a good indicator of a nonverbal cue, one which is not well-researched in traditional F2F communication. A study has been done to determine whether a person's biological sex and/or general social empathy determines the perception of how quickly the recipient responds to messages (Ledbetter, 2008). Faster response rates during the day tend to increase trust in online groups and positive perceptions overall while slower response rates are preferred during the evening hours. Slower response rates in the evening may be preferred to lower the accountability of necessitating a response on the part of the original author of the message, or to simply be given privacy during the evening hours. Immediacy in time proxemics relates to responding quickly just as nonimmediacy relates to responding slowly. Men are more tolerant of delays than women, who are more likely to email daily and expect quicker responses. It was initially thought that emails were only temporarily efficient to women, staving off an inevitable F2F conversation. The study addresses how the nature of CMC's asynchonicity gives people time to select which traits they demonstrate online, giving people an ideal representation of the self, making for a more satisfying conversation than what could be potentially afforded by F2F contact (Casale et al, 2015; Ledbetter, 2008). A stark example of ideal representation exists in the form of perfected (photoshopped) profile images. Outside visual imagery, users can also look up information during the conversation (via Google) to appear more informed.

Because people are worried about presenting a perfected-presentation of themselves online, they are participating in problematic Internet use practices by avoiding imperfections. A perfected-representation of the self online is afforded by the reduction of nonverbal messages and nature of asynchronous messaging. People communicate online for the sake of needing to belong to a community and to create a self-representation of some sort akin to Howard Rheingold's (1993) virtual communities, defined by Internet users who identify as citizens of the net. A self-representation is created in part by how people perceive themselves and by how others perceive them. Frequent status updates, self-promotion activities, posts focusing on personality traits, and photo posts suggest the person is more narcissistic.

Many assumptions must be made by people online about the people they talk to since the F2F element has been removed. For example, typing in capital letters incites anger in individuals who do not know the author of the message (Carter, 2003; Byron, & Baldridge, 2005). Ambiguity in emoticon usage exists as well; some emojis may be confused for thoughts or feelings which are not being expressed. There is often an element of sarcasm or vernacular which requires translation. Even some emoticons require translations when used by different cultures; for example, the steam puffed from the face when used in Japan typically means a "look of triumph" but when used in the United States, the emoji takes on an entirely different meaning—with great frustration (Logan, 2015). Students asked said they frequently make friends in CMC contexts and perceive nonverbal communication in CMC to exist, despite previous studies suggesting otherwise (Carter, 2003). However, the same study still persists that transactional—synchronous—communication cannot take place in CMC contexts. As such, the sender and receiver and messages cannot, at any time transmit their messages at the same time (Carter, 2003, p.34; Knapp, 1980). Referring to the transactional model of communication here and while this particular model is designed for communication which occurs in physical contexts, feedback

does indeed occur, and messages can be sent simultaneously through a channel with interference (noise). While voice-over-Internet-protocol (VOIP) may not have existed in the same functionality as it does now, the sender and receiver can indeed transmit their messages at the same time. Another platform, Liverjournal, does not allow for synchronous messaging, however, and follows the traditional asynchronous CMC format.

Livejournal was chosen as another social media platform of analysis in a study which analyzed the role of emotion in blogging when taking consideration how users share and interact with others' posts through the means of paralinguistic cues. Albeit somewhat outdated, Livejournal has the ability to host a variety of post types. While it has fallen out of popular usage, the platform allows for a rich integration of nonverbal TPCs. Part of the argument behind the researchers wanting to choose Livejournal as opposed to Facebook is due to the degree of anonymity afforded by the site as opposed to Facebook, which requires users to create a factual representation of the self (Rodríguez-Hidalgo, Tan, & Verlegh, 2017). Whether Facebook's users ultimately create factual accounts or not is in contention. Livejournal allows people to create a somewhat more anonymous profile in which it does not require one's real name to register for an account. However, Livejournal still employs a similar friending system as Facebook, which helps accomplish the study's goal. CMC allows more time for people to compose themselves and their messages without giving nonverbal cues in fear of negative judgement otherwise. Because people feel more comfortable communicating online where they are not seen (where the element of visual nonverbal communication is removed), they are more comfortable to say things they might not feel comfortable enough to say in public. This may be why things better said in person are often said in digital contexts like email, social media, and chat rooms. People who exhibit very high social anxiety value CMC because it removes the F2F component which worries them most. Being able to communicate online removes the requirement of having premediated *spoken* 

conversations in addition to being in close physical proximity to other people. In turn, conversations held in digital contexts tend to be deeper and more intimate than ones held in F2F contexts. People seek approval through avoiding disapproval by only sharing favorable aspects (Casale, Fioravanti, Flett, & Hewitt, 2015). Sharing only edited or favored content is also an aspect shared in selective exposure theory, in which people only share what they want others to see (Knobloch-Westerwick, 2014). Sharing favorable aspects through CMC is a behavior quite common to email usage.

Email is an asynchronous form of communication which allows users to send messages to people all over the world. Despite email not being an ideal way to convey emotion, recipients of email will be able to perceive emotion from senders whether intended or not. An additional study focused on how users interact with one another using nonverbal cues and negotiate emotion through email included 13 MBA students who evaluated the nonverbal context of emails and offered their impressions of anger and happiness expressed through email communication (Byron, & Baldridge, 2005). The lengths of the emails, how messages were written (capital letters or not), response time, and what is not written offered nonverbal cues to emotion. Explicitly saying how a user felt is the best way of telling people how they feel, overall. Researchers from the Rochester Institute of Technology and Oregon State University conducted a study which included a focus group asking participants to evaluate nonverbal cues in emails to determine recipient perception of the sender. The emails included all capital letters and some emoticons. Capital letters generally indicated anger while emoticons indicated happiness. The participants in study 2 group were 73 undergraduate students from the ages of 17 to 22 in a management course, and most were male. The sender of the email who sent the message without the emoticon, while it did not have any words with capital letters, was perceived to be in a bad mood. Study 3 focused on just one aspect of nonverbal communication: the use of all capital

letters. 138 undergraduate and graduate students between the ages of 20 and 38 (mostly male, again). Two letters were evaluated– one in all caps versus the one with normal capitalization and the likelihood of replying to either email. The sender who used proper capitalization was perceived as more likable and students were more likely to respond to the email. The message containing words in all caps was met with disapproval and students were less likely to respond to it. Across the three studies, students were very aware of emotion expressed through email. Subjects involved in the study responded positively to the hypothesis, that– in order to project a more perfected self-representation, the lesser perfect aspects of the self were left out of the internet self. For example, even messages which contained errors were deleted and redone in order to project an image of perfection. Displaying a message which contained errors would show that the person is not perfect (even in email communication). Users strive to portray an image of perfection despite what kind of personality traits they display outside the digital world, but individuals who have anxiety conditions may try harder to impress others online (Casale, Fioravanti, Flett, & Hewitt, 2015; Hitt, 2018). In this, the online environment may bear benefits for non-neurotypical individuals.

When compared to neurotypical individuals who do not experience chronic symptoms of depression, anxiety, panic attacks, or other mental health conditions, adolescents with social anxiety value being able to control the ebb and flow of Internet communication for its ability to produce texts which closer portray the adolescents' thoughts and feelings better than F2F communication (Peter & Valkenburg, 2006; Casale, Fioravanti, Flett, & Hewitt, 2015). Social media is assumed as ubiquitous as it is indispensable. Impacts on communication like large, nationwide events (such as national elections) influence the ebb and flow of communication (Vie, 2018). Lots of cross-sectional "then and now" statistics comparing how many members used certain sites and how many posts were sent during a day. Both personal and professional
networked relationships are shaped by social media. There is a boon of personalized content which is good and bad– great for people who want to stay away from sensitive and potentially triggering content but bad for those who stay locked within a cloud of information which does not challenge their viewpoints or offer new perspectives. Unfollowing, unfriending, and blocking as a strong indication of a nonverbal communication tactic born online between friends, family, and people users barely know.

Strangers, however, are required to make assumptions about their readers based on traits dependent upon how people are expected to act and feel in public settings, personal opinions, and experience for the sake of interpreting messages (Riordan, & Trichtinger, 2017). Just like the article on email egocentrism (Kruger, Epley, Parker, & Ng, 2005), authors of emails thought their recipients would understand their messages better than they actually did, especially regarding emotion and sarcasm (Riordan, & Trichtinger, 2017; Rodríguez-Hidalgo, Tan, & Verlegh, 2017). Actual accuracy levels ended up being relatively low despite expected accuracy. In the study, friends interpreted their other friends' emails better than strangers. Email writers had high confidence that their emails would be interpreted correctly where in reality, the chances of emails being interpreted correctly was low.

#### **Improving Online Communication Through Visual Rhetoric**

Visual rhetoric (like memes, gifs, stickers, and other nonverbal communicational cues) plays a role in reducing misunderstanding in computer-mediated communication (CMC) by replacing at least some part of nonverbal communication (Pflug, 2018). Emoticons among the utilization of other nonverbal cues such as figurative language, varied fonts, punctuation, capitalization, nonverbal vocalization allow to set the direction of the conversation, leaving less room for miscommunication (Yuasa, Saito, & Mukawa, 2011; Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017). The aforementioned elements of digital nonverbal communication are all effective in creating an online presence. Germans, users from a low-context society in general, made more self-revealing statements than their Indian counterparts, users from high-context communities. Indian users incorporated far more emoticons into their dialogues than Germans, suggesting that people from high-context cultures generally use more emoticons than people from low-context cultures.

Student motivation is directly affected by nonverbal strategies, especially ones which send positive reinforcement and closeness which include immediacy behaviors like colorizing words and sending memes, thus decreasing psychological distance between people (Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017). The quicker the response time, the closer people feel to one another regardless of physical proximity. For example, time itself can communicate nonverbal messages such as how much time it takes for an instructor to respond. This may correspond to how much students think the instructor cares about the students and how warm the instructor seems to the students. Mixing media helps strengthen messages; incorporating more video and color into the online environment makes the instructor seem more approachable to the students. There is generally a positive association between perceived supportive message quality and emotional empathy (McLuhan, 1969; Ledbetter, 2008; Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017). The reply rate is meaningfully associated with message perception, particularly when the timestamps on the messages are close togetherfast replies are perceived more positively than slow replies. Participants with more emotional empathy view messages as higher quality than those with lower emotional empathy. Time influences the interpretation of messages particularly in reference to response rate and timeliness. In order to avoid potential conflict, group collectivism and harmony is best achieved when a generous supply of emotions and other digital nonverbal communicational cues are used (Choi, Im, & Hofstede, 2016). For those in individualistic cultures, support using messages such as

"great idea!" and "I like it!" may contribute a sense of understanding and solidarity (p. 317). Such phrases easily mimic ones used in F2F communication and may add social or emotional support to conversations over the net.

Following up on the use of manipulated language, the study provided an insight as to why collectivist cultures like South Korea favor the use of emoticons, emoji and cartoon characters as opposed to the use of text used by individualistic cultures like the United States. Markets existing in collectivist cultures simply use more emoticons. Individualistic cultures seem to focus less on the facilitation of transmitting messages of support and kind messages through either images or emoticons than collectivist cultures. Instead, focusing on the overall functionality of social network systems (SNS) has been the overarching goal as opposed to an alternative writing system (with regard to individualistic cultures). In this manner, the ease of navigation through SNS is often the primary concern, benefitting a wider variety of audiences. Knowing and understanding the cultural market prior to designing the SNS space (and its language modalities) helps curate a positive environment for its users. On the other hand and to reference the study which analyzed cross-cultural communication in computer-mediated contexts through Twitter again, the comparison between how high-context (India) and low-context (Germany) cultures communicate online through Edward Hall's (1976) cultural dimension of contextuality in CMC and Internet forums (Pflug, 2018). 376 posts were analyzed overall. Following true with Hall's contextual dimension, Indian users shared less personal information online than their German counterparts. While creating a digital language which assists two or more cultures better communicate online is an opportunistic view of the future net, it is important to remember how much or how little information each culture will divulge to one another. Perhaps a digital language, formed in part by memes, could help users communicate more information than they would be willing to transmit through words alone.

The "one does not simply" meme, derived from a famous scene in "The Lord of Rings: The Fellowship of the Ring" featured in Figure 3 below, makes a comment with reference to a topic or idea taken for granted or an issue that is more complex than it appears (Jackson, Osborne, Walsh, & Sanders, 2001; Hitt, 2018).



Figure 3. "One does not simply walk into Mordor."

Another meme, featuring actor Nicolas Cage with a bewildered expression titled "you don't say" displayed in Figure 4 on the following page, plays upon the ignorance or obviousness of the topic. Users of the meme will often place a loosely-drawn representation of his face next to the object they are mocking or otherwise type a caption inside the meme itself. A myriad of other memes exist to express users feelings. Leaning towards a more serious note, a student's



Figure 4. "You don't say" meme.

reflection featured in a study based on non-normative expressions of rhetoricity that by implementing various memes of a satirical nature, their intended audience members, determined by the place where it would be posted, were those who ignore adolescents' mental health issues. Using memes from popular culture helps engage a variety of readers while raising awareness to serious issues.

By using memes—a genre that is traditionally reserved for funny critiques or commentaries on current issues and national discourses—students push against the purpose of the medium, toggling between humor and serious content and pairing image with text to circulate texts that question our understandings of disability and madness (Hitt, 2018, p. 183).

Social media brings people to say what they would not normally say in person. Constructing a profile, hashtagging a picture, and posting on a feed is argued to be writing. Using alternative language styles, codes, and visual language aids users without the ability to process words in the same way neurotypical individuals can, but still express themselves in meaningful ways. As such, the memes mentioned previously assist to augment communication rather than hinder it when words cannot be found. In addition to helping users find a voice, memes like the ones mentioned above along with a myriad of other help engage them with a new wave of social

activism never seen before, combining satire and truth. Another benefit of sharing and creating memes online, whether for activism, fun, or the sake of communication, is that it can be done under some degree of anonymity.

Unaware of custom privacy settings, users are afraid of what others (employers, family members, parents, others) will see when they post online such as: restricting access to accounts (Twitter), making decisions about which friends to keep and which ones to unfriend, being careful to choose words after witnessing how their actions online can greatly influence what happens to them in the "real world," and people trying to keep their personal and private lives separate (Vie, 2018). One participant mentions that it is dangerous to get involved in political issues because "things are remixable" (p. 118). In being remixable, personal information posted online can be taken out of context and remixed into problematic situations which put users at risk of having information exposed to unwanted parties. Others do not want to get mixed up in things due to their race/gender/position, or whatever else; it could end up in a potentially explosive situation. What constitutes as appropriate social media writing is another issue, but whether nonverbal cues aid the appropriateness of such writing is unknown. It is known, regardless, that the nonverbal cues, such as emoji, emoticons, stickers, and memes, carry a context which a large population of the Internet understand without further deciphering or looking up (Yuasa, Saito, & Mukawa, 2011; McPartland, 2013; Dixson, Greenwell, Rogers-Stacy, Weister, & Lauer, 2017; Rodríguez-Hidalgo, Tan, & Verlegh, 2017; Kiatkulpiboone, & Paris, 2018). Because many of the emoticons, stickers, and emoji users frequently use online already resemble facial expressions, some of the communication between people using such nonverbal cues has become seamless. For the rest of the symbols which do not resemble facial expressions, hidden context or connotations may be attached to the emoticon, sticker, or emoji which may already be known or need to be looked up.

The purpose of a study focused on researching brain activity when exposed to emoticons through a series of fMRI scans is to see whether or not seeing nonverbal cues in online communication (mostly textual but still visual) affect the brain in any way (Yuasa, Saito, & Mukawa, 2011). Symbols and auditory representation of speech are processed by the ventral potion of the left inferior frontal gyrus seen in Figure 5 below (Crafa, 2015). Facial expressions and facial recognition activate the right inferior frontal gyrus which is very close to the same region.



Figure 5. Left inferior frontal gyrus, shaded.

The results of the study correspond with previous studies (Sakai, 2007). Supporting the study, individuals may display facial expressions suggesting the experience of emotion such as joy and grief supplemented by words to describe the feeling. It is generally agreed that supporting facial expression with words is an effective approach to communicating how one is feeling to another person (Yuasa, Saito, & Mukawa, 2011). Similarly, in the event that some emoji are ambiguous to Internet users, a textual description to further explain how one is feeling would support the nonverbal cue transferred to CMC with little chance of miscommunication. Such a practice is already set in place some multimodal contexts– video game characters may display a vein

symbol on his/her forehead to express frustration while shouting. Comic books frequently display a variety of nonverbal cues with some sort of explanation in the margins as seen in Figure 6 following on the next page. Similar to how other digital representations of visual nonverbal cues offer some explanation through predetermined knowledge or small explanations, the comic shown in in Figure 6 on the following page offers in-frame context to ensure that little misunderstanding should occur.

Just like the article on egocentrism in email communication (Kruger, Epley, Parker, & Ng, 2005), another study focused on the accuracy of perceived message intent deals with intended information perceived by emoticons versus interpreted emotion by the reader (Riordan & Trichtinger, 2017). A study by Hancock, Landrigan, and Silver (2007) determined that perceived emotion is generally correct whenever emoticons are used. This shows that emoticons are not as ambiguous as previous studies think (Kruger, Epley, Parker, & Ng, 2005), but emoticons and emoji can be clarified with the addition of a few words in the case of perceived misunderstanding (Yuasa, Saito, & Mukawa, 2011). People often base their communication (what they say, are going to say, or do not say) on what they think the listener of the message (recipient) knows/does not know. This is a broad assumption message creator's part.



*Figure 6*. Multiple nonverbal cues are displayed in the panel of *Yōkai Shōjo* above such as smugness and exasperation (Funatsu, 2017).

The efficacy of communication widely depends on how much experience the writer has with the reader (bringing in the high-context versus low-context conversation here) and how close the two audiences know one another; the more a person knows about the reader, the more effective the conversation will tend to be as there does not need to be as much explained between the two people (Hall, 1976). Much of the information is nonverbal (high-context) and is assumed/already known. While high-context cultures lean towards using more visual communicational cues (emoji, emoticons, gifs, kaomoji, memes, stickers) through digital means than those from low-context cultures (Choi, Im, & Hofstede, 2016, Pflug, 2018), users from low-context audiences have begun to communicate with one another using visual cues more than before, perhaps as a result of the exposure to users from high-context cultures. More beneficially and when used in conjunction, the two cultures may communicate solely by using the visual cues alone with little ambiguation.

Although some rhetorical work has been done to address the relationship between digital nonverbal communicational cues used online (chiefly Twitter), most research still exists in the realm of intercultural and international communication and has yet to enter the realm of visual and digital rhetorical research. As such, the content analysis which follows this section aims to determine more of how digital nonverbal communicational cues enhance conversation, while not between two or more individuals, but in general. One of the primary gaps in the research is that while a relationship between culture, language, and digital nonverbal cues has been established in intercultural and international studies, more research needs to be done in the field of rhetoric. Because digital nonverbal cues and culture/language have been studied by intercultural and international framework, the literature review had been written to reflect the existing studies. The content analysis will stand juxtaposed to the intercultural/international studies to support preexisting research that relationships between digital nonverbal communicational cues and culture/language do exist and are essential to the knowledge set of the field.

#### **Chapter 3: Methodology**

I intend to employ a mixed methods approach to investigate the primary gaps in the research which is while relationship between culture, language, and digital nonverbal cues has been established in intercultural and international studies, the field of rhetoric has barely touched it. For the quantitative portion, I plan to examine publicly accessible messages on Twitter, whether in conversation or as single posts, as an observant. While I will be a participating observant, I will not be including any of my own tweets (messages) in the pool for analysis. This approach is aimed to assess internet users' messaging habits regarding the use of emojis and images. The strategy I intend to use is called looking at the frequency distribution of data while extraneous quartile ranges will not be applicable to this research (Lavrakas, 2008). In addition to the strategy of frequency distribution of data, this study is considered correlational research due to the rhetorical relationship established between digital nonverbal cues with culture, language, and conversation. The quantitative frequency distribution will be supplemented by a small qualitative study done in the form of an analysis which will entail the description some tweets' content, down to translation. Because Twitter is a dynamic environment which changes daily from accounts moving from public to private, promoted tweets clogging up the stream, and large tweets taking as much as one whole screenshot, I established a method to keep track of the screenshots by keeping them in separate folders on my phone. The quantitative research will begin as I count the number of instances a particular emoticon, sticker, nonverbal vocalization, etc. occurs. Counting the instances of digital nonverbal cues and keeping a record of how such cues (and what types of cues) relate to language/culture will help me better understand how Internet users implement nonverbal elements into their everyday communication. The participant observation has been supplemented by previous research in the literature review, albeit addressed through a different interdisciplinary lens known as the Cultural Dimensions Theory.

Kenneth Burke's Pentad, as seen in Figure 7 on the following page featuring customized labels gleaned from the content analysis, provides a convincing systematic framework to evaluate motivation in relationships using a rhetorical strategy to answer five questions with regard to language and life (Chamberlain, 2014). Burke's Pentad is an appropriate framework through which to analyze the content analysis because each of its points (or questions, the parts of the pentad) can inform the frequency distribution strategy set up to analyze the pattern of the tweets. For example and while it is already known where tweets and messages are posted (the scene determined as Twitter on Figure 7, again, on the following page), the current ambiguity of agents (Twitters users) can be further determined by analyzing the users' languages and communicational patterns. Further disambiguating the current unknown, Burke's Pentad will help distinguish the act in which its agents participate by describing the types of digital nonverbal cues, and perhaps discover cues which have not been previously described in the literature review. While the agency, as defined by Burke (1945), has also been previously determined by research through the intercultural nature of the literature review (agency through posting tweets), the quality of the tweets may also be further described through the use of Burke's Pentad. Finally and perhaps most important with regard to this study, the purpose of the use of digital nonverbal cues, while also understood at its most basic as to enhance messages, will be more deeply analyzed. The frequency distribution strategy aided by Burke's Pentad aims to disambiguate the manner through which messaged are enhanced by digital nonverbal cues. Where this strategy falls short is how the small qualitative potion of the study will fill in the gaps- by analyzing a few tweets which contain the highest instances of digital nonverbal cues, or otherwise demonstrate a total lack of alphanumeric written language in favor of the use of nonverbal cues.



Figure 7. Burke's Pentad, featuring customized labels based on findings in content analysis.

#### **Data Collection and Analysis Procedures**

To reiterate the data collection manner mentioned in the methodology portion more articulately, several tweets from Twitter were collected and recorded through the means of screenshot over a period of a few weeks. While I typically access the Internet on a mobile device, an iPhone 6S+, to be specific, I attempted to collect screenshots from the desktop platform in addition to the mobile platform (through the means of the Twitter app when accessing Twitter on mobile). Collecting screenshots on desktop, while somewhat inconvenient, permits me to collect more tweets at a time, depending on tweet and media/multimedia length. Tweet size and length, as previously mentioned, was the independent factor when determining how many I could collect at once. Because I follow a number of private accounts, I paid careful attention to ensure that I cut out the tweets posted by unlisted accounts to ensure the media of my research would remain within the public domain. To define how unlisted or private accounts appear in a Twitter feed, a user who has chosen to make his/her account private will display a padlock next to the name. In order to maintain anonymity of the private users' tweets, I obscured both users' names and avatars just in case any of the collected data were to be used in the future for further analysis or research. Before describing the research method more extensively, it is important to note that using social media is a highly customizable experience, based on who a user chooses to follow. Because I follow quite a number of Japanese-speaking accounts, many of the tweets I see are written in Japanese. While the research can be repeated by another researcher, my experience every experience on Twitter is unique based on the users followed.

Whichever username with the @ symbol signifying the users' handle appears first determines the ownership of the tweet for the sake of the sample and user count as seen in Figure 8 on the following page. Retweets, tweets which are shared by users from other public users' accounts, are treated as tweets created by new users rather than shared tweets because only one username, signified by the @ symbol appears. While the retweet symbol stands before the name of the user who retweeted the tweet followed by the word "Retweeted," note that the user's handle preceded by the @ does not appear. However, the tweet which was retweeted features the user's handle preceded by the @ symbol (signaled by the arrow featured in Figure 8 on the



following page ), determining authorship for this particular study.

Figure 8. Retweet

Quoted tweets operate a little differently within this study than retweets in that they are treated as messages coauthored by the first username which appears, even though two Twitter handles (featuring the @ symbol appear). See Figure 9 below for further details including the white arrow pointing to the first user which appears in the tweet.



Figure 9. Quoted Retweet

Because the user who is quoting the tweet is adding more information to the retweet (and the retweet is essentially enhancing the communication of the user doing the action of retweeting),

the primary authorship belongs to the user who is quoting the tweet and not the creator of the original message. Another interesting feature of the quoted tweet is that only the avatar image of the user who is quoting the tweet appears, not the creator of the original message.

I collected tweets in increments of one hour at different times of the day with the intention to collect tweets from different users rather than seeing tweets from the same users time after time to record a variety of users' agency in action. Retweets are considered native tweets from other users. Punctuation is not included in the count unless it is repeated, representing a suggest to illicit emotional response from readers. Examples include the often-misused ellipses (...so...) and copious use of exclamation marks (exactly!!!). Capitalization of words, the use of the caps-lock key, has also been counted as a form of textual nonverbal vocalization. While Twitter handles have been crossed out to maintain anonymity, Twitter users often use emoji in their screen names which are not a part of their handle (the @name), which directs users to their pages. These instances have not been counted as the users' names do not typically manipulate the meaning of their messages. Videos and images, regardless of whether the content has been linked to an external link, have also been counted. I wanted to determine how many different languages were used because research conducted to construct my literature review suggested that language is culturally informed (Carter, 2003; Faulkner, 2018). For example, Internet users based in East Asian counties such as Japan who also speak Japanese may be more inclined to use emoji or kaomoji than their western counterparts. Due to exposure to cultural uses of language which favor visual methods (and built-in translator services), many users online have begun to adapt to visual methods of communication including but not limited to the use of animated gifs and emojis. The character-limit of twitter may have also given way to the international trend of global users favoring visual language over alphanumeric text.

# **Participants**

Because tweets posted by users on Twitter exist within a public domain, IRB approval did not need to be previously sought for the purpose of this study. The only users whose tweeted content was analyzed in the study were the users whose accounts were locked or made private (noted by the lock icon next to their names). There were five private users in the study. While the private users' content was not analyzed throughout the study, their participation (user count) in addition to tweets (tweet count) was counted in the study even though the language they used and the information they communicated was not considered, again, since IRB approval for this study was not sought. One particular account was locked during one interval but was not locked during the other intervals of study. As such, this account in question was counted during the times it was unlocked but was not counted when it was locked. The number of users, language use, tweets posted, and nonverbal cues used depended on both the time of day and day observed. For example, fewer English tweets were posted during the midnight interval in comparison to intervals taken in the middle of the day. In addition to the languages used, the content changed slightly based on the time of the day, time of the year, day of the week, holidays approaching, and cultural/societal events (such as school and days off).

For this data set, ten languages were observed which include the following in no order: Japanese, Brazilian Portuguese, English, Spanish, Italian, Korean, Russian, Arabic, German, and French. Korean, German, Arabic, and French were only used in one tweet whereas Russian was used in three tweets. Japanese and English were used most of the time with Japanese being the primary language used. 157 Twitter users, combining both locked and public users, were observed in the study. Multiple users communicated in more than one language within their tweets, perhaps as an added effect for emphasis. A couple of users, on the other hand, did not use any written language at all within their tweets but instead opted to simply post a video or image as the primary content of their tweets.

## Limitations

There were some clear limitations to this study. Part of the limitations lie in where I decided to undertake the research (Twitter) and the other part of the limitations were determined in how I recorded the data. As mentioned previously in this work, Twitter limits the amount of text the user can type into one tweet. While the text limitation is not so much of a restriction for users of non-alphanumeric texts like Japanese, the restriction impacts Roman-formatted text like English and Spanish users much more. As a result of the text limitation, users may have not been able to express themselves as much as they wanted to or to their highest potential such as on platforms without text limitations like Facebook and Tumblr. While the text limitation set in place by Twitter is more of a trademark for which it is known rather than a form of censorship, the limitation may restrict users from expressing themselves as much as they want. At any time during the research, there is a possibility that I may not have been capturing the true intended agency as a result of the text limitation despite Twitter's integration of multimedia.

On the topic of multimedia, I opted to display only a preview of all multimedia posted on Twitter as a result of the manner in which I was collecting data. Because I wanted to collect all data through the means of my smartphone (Apple iPhone 6S Plus) due to the convenience of time, I wanted to potentially be able to collect more than one tweet at a time. Unfortunately, many tweets still took up most of the screen and yet did not display the entire contents of the tweet. My method of collecting tweets resulted in some tweets being incomplete (which does not necessarily matter since I was not recording specific contents of pictures and videos) and several screenshots per interval. While the tweet preview option did cut of some content with regard to videos and images, it did not cut off any other typed content such as emoji, *kaomoji*, cap-locked text, and nonverbal vocalizations.

Returning to Japanese and while a high volume of tweets recorded were typed in the Japanese language, I can only generalize the types of digital nonverbal cues favored by the users specific to this dataset, not all other Japanese-language-speaking users who post on Twitter. Related to the variation of Japanese users present on Twitter, all Twitter feeds are different. Capturing demographic information on Twitter is very difficult which means the findings and conclusions presented here cannot be generalizable to all Twitter feeds across the entire social media platform.

#### **Chapter 4: Discussion/Content Analysis**

This study aimed to analyze the relationship between digital nonverbal cue use and understanding among Internet users, chiefly those who communicate via Twitter. Uncovering the relationship between language use and digital nonverbal cues was the second objective of the study determined by the research. Between March 4th, 2019 and March 24th, 2019, I observed tweets, retweets, and quoted tweets during seven different intervals. Because I intend to use Burke's Pentad to analyze the results of the tweets posted during these intervals, I will divide this content analysis section by each point of the Pentad, beginning with the scene, being Twitter. Burke's Pentad can be thought of as a disambiguation machine, much like how Wikipedia multiple articles of the same name. Burke's Pentad is an appropriate framework to analyze this set of research because the framework aims to uncover ambiguities which may lie beneath the narratives which exist in each section of the pentad. For example and while Burke's Pentad aims to describe the users intentions to use nonverbal cues through "purpose," because each part of the pentad is interlinked to one another, other intentions may arise as a result of analyzing the other parts of the pentad ("act," for instance). The interconnected nature of Burke's Pentad demonstrates that not only is all communication rhetorically connected to one function or another (perhaps through agent, act, purpose, scene, or agency), but how the interconnectedness can aid to further understanding of how online communication through the use of digital nonverbal cues works. To further define the potential ambiguities, the act itself, predefined as nonverbal cues in the modified version of Burke's Pentad in Figure 7 contained in the methodology section above on page 49, may define multiple variations of digital nonverbal cues, which will be disambiguated later in this chapter. The purpose as well, while predefined as to enhance messages, may also reveal another reason behind the act or use of digital nonverbal cues.

While the five elements of Burke's Pentad have been separated in the following content analysis, it should not be thought that the five elements be considered in isolation. Instead, each element augments and supplements the other, in motive and reason. For example, the **scene** in Burke's Pentad (represented by Twitter's atmosphere itself) supports its **agents** (the users) which therein contains its users' **agency** (tweets), augmenting the users' **acts** (the use of digital nonverbal cues), which eventually reveals the **purpose** behind the users' activity– to communicate more clearly in restricted spaces.

The results of the observation done at different intervals between March 4<sup>th</sup>, 2019 and March 24<sup>th</sup>, 2019 are featured in Table 2 below.

Table 2.

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Day	Interval	Users	Tweets	Languages	Nonverbal
03/04/19	18:00-19:00	54	84	6	52
03/05/19	10:00-11:00	23	28	7	16
03/06/19	23:00-00:00	15	24	3	21
03/10/19	11:00-12:00	36	46	5	38
03/10/19 <sup>a</sup>	14:00-15:00	20	24	3	22
03/11/19	06:30-07:30	32	55	3 <sup>b</sup>	48
03/24/19	15:00-16:00	16	22	5	24

<sup>a</sup> Counted during two different intervals as a result of returning to daylight savings time

<sup>b</sup> Japanese heavily outweighs the other languages used at this interval

I attempted to record tweets at different times of day during each day I observed, but purposely recorded tweets during two intervals on March 10<sup>th</sup>, 2019, when many parts of the world returned to Daylight Savings Time to see whether or not there was a change in the use of digital nonverbal cues. Note that the days and intervals represent the **scene**, the users represent the **agents**, the tweets represent the **agency**, and the languages in addition to the nonverbals

represent the act. Burke's Pentad, through the following subchapters will explain the **purpose**, while alluded to above, serving to disambiguate messages and communicate messages better (Burke, 1945).

### Scene: It's Springtime for Twitter in Cyberspace

While Twitter can be accessed through a variety of means– on desktop/laptop by logging into the website, on a mobile device by logging into the website, and through the mobile app, I decided to access the micro-blogging platform through the latter– by the use of the mobile app. The choice to access Twitter via the mobile app was one made for convenience's and accessibility's sake rather than functionality. Because I wanted to choose the target intervals spontaneously, opting to use the mobile app to access Twitter was an obvious choice; I could record tweets even when a full-sized computer was not accessible.

I chose this specific timeframe (listed above in Table 2 on the previous page) to record tweets from Twitter because several events were happening concurrently– spring break had just begun for multiple universities across the United States, Daylight Savings Time was about to resume, and Spring, the vernal equinox, was about to begin. I recorded all content in the form of screenshots filed by interval and day. While Twitter allows users to customize the appearance of their Twitter feeds to some degree with regard to how much of a tweet appears on the screen, I opted to display media previews rather than for my feed to display entire tweets, which may potentially take up the entire screen, or require scrolling to record in entirety. I also viewed and recorded all tweets using an option called Night mode, an interface which somewhat inverts the color display of Twitter's interface by darkening the background and turning the text white rather than black. This was not an aesthetic choice but rather a choice to aid accessibility on my part as I regularly use all programs in "night mode" or "dark mode" when available. During the time which I analyzed and recorded tweets from Twitter, many of the tweets posted were in Japanese, while the majority of recorded users, albeit by a very narrow margin of four, were English speakers.

Because Twitter restricts its users to type in such small spaces (280 characters for all users, across the word) and upload up to four photos, users' agency may be augmented by the use of digital nonverbal cues when perspicuity alone fails. The ability to retweet and quote tweets helps users communicate their messages using the words and imagery posted by other users which enhances messages created by the users who share their own messages. Even the way a user's profile page is set up helps communicate a message about the user themselves which goes beyond written textual information alone. For example, users have the option of uploading both a cover photo and a profile photo which most suits them. In addition to uploading the photos which will become the digital representation of the self, the provide a small biography which may include links to external sources, whether the sources are websites created by or dedicated to the users, or videos which the user wants to represent in their biographies. Twitter's restricted spaces, as Alfred M. Hitchcock (1914) may have described it, embodies "force gained through brevity" (p. 376).

## **Agents: International Users Who Create Dialogue**

People who choose to use Twitter do so for a variety of reasons, whether to read the news in abbreviated formats, interact with friends and family across the globe, interact using smaller, more concise messages, or simply to add another social media platform to their arsenals. All tweets posted on Twitter are publicly accessible with an exception for tweets posted by users whose accounts are unlisted, or locked, denoted by a lock symbol next to their names. Because Twitter is a public domain, I did not need to seek IRB approval for this body of research. Although a few private users were observed and captured in the recorded study, only public users' content was considered for analysis under Burke's Pentad. Public users greatly outnumbered private users, as there were only five private users counted in the study. Even though none of the private users' content was considered for analysis in this study, each instance of their tweets in addition to their user count was included in the study while their language usage and communicated content was not included. When considering locked accounts, one particular locked account was private during the March 6th, 2019 23:00-00:00 interval of the study but was public during other intervals of the study (the March 24th, 2019 15:00-16:00 interval, for example). As a result of the account in question being locked at different intervals, it was counted and analyzed during the March 24th interval but not analyzed at the March 6th interval. Language use, the number of users, how many tweets were posted, and how many digital nonverbal cues used were also dependent on both the time of day and the day observed.

I also hypothesize that the sort of context may change with regard to the time of the year, the day of the week, what kinds of holidays are approaching, and the cultural or societal events are happening (which also include school breaks and days off). In total, there were 157 Twitter users observed in this study. In this research, I observed the use of ten languages which include the following from highest use to lowest use: Japanese, English, Spanish, Italian, Brazilian Portuguese, and Russian. Arabic, Korean, German and French were each used in one instance. There were two tweets which did have any language use but instead employed the use of a photo or video. An unexpected phenomenon which occurred several times throughout the study seen below in Figure 10 on the following page was the instance where multiple users communicated with more than one language within their tweets.



Figure 10. Japanese and English used in one tweet.

I hypothesize, from personal experience, that users who employ multiple languages in a single message do so as an added effect for the purpose of emphasis. As mentioned previously, a couple of users, retweeted by people I follow, did not use written language as the primary message of intent but instead employed visual messages for the purpose of communication in lieu of written communication.

Users who live within high-context cultures communicate using more visual rhetorical strategies online than those who come from low-context cultures, since low-context cultures rely on fewer visual cues and more direct, explicit written cues, even online. This trend was also generally seen on Twitter in each interval whenever users from western or low-context cultures were present, or whenever users would communicate using English. Table 3 on the following page illustrates how many different language users were observed during which intervals and which digital nonverbal cue(s) were preferred by which language users.

Table 3.

Interval and Time	Language	Number of Tweets	Primary Type of NV <sup>a</sup>
(Scene)	(Agency)	(Act)	Used (Agency)
03/04/19	Japanese	60	Punctuation
18:00-19:00	English	17	Uploads <sup>b</sup>
	Spanish	3	Emoticons
	Italian	1	Emojis
	Russian	3	Uploads
	Arabic	1	Uploads
03/05/19	Japanese	8	Kaomoji
10:00-11:00	English	11	Uploads
	Spanish	2	None
	French	1	Uploads
	Italian	4	Uploads
	German	1	Emoji
	Portuguese	1	Abbreviation
03/06/19	Japanese	17	Punctuation
23:00-00:00	English	3	Uploads
	Spanish	3	Emojis
03/10/19	Japanese	12	Punctuation
11:00-12:00	English	15	Uploads
	Spanish	4	None
	Italian	8	Multiple languages
	Portuguese	2	Uploads
	Not applicable	1	An upload
03/10/19	Japanese	7	Kaomoji
14:00-15:00	English	8	Uploads
	Spanish	3	Uploads
03/11/19	Japanese	48	Uploads
06:30-07:30	English	6	Uploads
	Italian	2	Punctuation
	Not applicable	1	An upload
03/24/19	Japanese	8	Uploads
15:00-16:00	English	4	Nonverbal vocalization
10100 10100	Spanish	5	Emoii
	Portuguese	3	Punctuation
	Korean	1	An upload

Each interval broken down by language and nonverbal cue type.

<sup>a</sup> Nonverbal Cues.

<sup>b</sup> Uploads include non-native content to Twitter such as videos, links, images, and animated gifs. The primary content of uploads was images uploaded by users.

#### Agency: Tweets, Retweets, and Quoted Tweets

The agency which appears on Twitter can be fundamentally defined by the primary form of communication method which takes the form of tweets, retweets, and quoted tweets. Tweets are the main, primary source of communication for a user on Twitter which are created by the users themselves. Retweets, for the most part, are secondary sources of communication shared by users but were created by other users. Quoted tweets are a hybrid of both tweets and retweets in that while quoted tweets are still retweets, shared content by users created by other users, such tweets also contain a primary response by the user who retweeted (or quoted) the tweet. Further explained and returning to the agency of the tweets as described in the methodology section enhanced by the use of Figures 8 and 9 on page 51, retweets were treated in the study as original messages (tweets) created by the user who created them, not the user who would share them. The agency is further defined by the singular appearance of an avatar next to the tweet, respecting the rule of whose avatar appears next to the tweet. The agency of quoted tweets, respecting the rule of whose avatar appears next to the tweet. Beyond the typical use of tweets, retweets, and quoted tweets, other forms of agency also apply.

In addition to tweets, retweets, and quoted tweets, promoted tweets were also recorded throughout the study. Twitter defines promoted tweets as regular tweets which can be boosted to be featured on wider audiences' feeds at the top of their timelines for a cost ("What Are Promoted Tweets?," n.d.). All promoted tweets display a small icon with the word "promoted" near the bottom of the tweet. Promoted tweets behave just like regular tweets in that they can be, liked, retweeted, replied to, and quoted. While tweets can be promoted by any Twitter user, tweets are typically promoted by advertisers and businesses rather than the general public. It should also be noted that promoted tweets may also be dismissed so that they may no longer appear on a user's feed. While promoted tweets were also counted and analyzed in the study, covert, private communication was not.

Direct messages (DM) or private messages (PM) were neither considered, nor recorded for this study as such form of communication falls outside the criteria for analysis. First, DMs/PMs are private communication which are not publicly available, requiring consent for access. Second, conversation was not the target for study in this research. Third, the sample size would have resulted in a much smaller pool for analysis. I simply want to acknowledge that the DM/PM system does exist and is used by Twitter's users for deeper conversation beyond the feed for a continuous stream of uninterrupted message and reply purpose. Returning to how tweets, retweets, and quoted tweets operate, there is a deeper layer beyond the message created by posting.

Like many other social media platforms including but not limited to Facebook, Instagram, and Tumblr, Twitter also has a liking system signified by a small heart at the bottom of the tweets. The true nature behind the like system is debatable; there are two schools of thought as to what purpose the like system serves. The primary belief behind the like system is that it operates as a social support and reciprocation system to demonstrate appreciation, either for the message or the user (Oh & Syn, 2015). Another belief system, applicable only to websites which retain data for liked posts such as Twitter and Tumblr, is that the like system serves as a sort of bookmark tool for users to refer to later. No academic research has been done on the later school of thought, which suggests that using the likes timeline for later reference is a littleknown tactic and that the like system being used as a social support and reciprocation system is better supported.

# Act: Digital Nonverbal Cues

In the final observed interval, a new type of digital nonverbal communication has been observed, one not considered before the literature review or content analysis– a Twitter Poll, as seen in Figure 11 below. In this poll, the question is as follows (translated from Portuguese)– choose a goal and RT (retweet) for it to work. The choices are: have money, focus on studies, work, (get a) boyfriend/girlfriend. While the original user who posted the Twitter Poll, similar to an audience poll conducted in the classroom used for probing pedagogical purposes, has encouraged increased participation through users who retweet and share the post again, a sort of appeal to pathos is being used on its participants in that users who retweet the poll will somehow become successful in their desires by sharing the post. Since polls have been introduced to Twitter, they have been increasingly more common in users' tweets.

<u>t</u> ı	Retw	veeted			
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	ter dinheiro				
focar nos estudos					
	trabalhar				
	namoradinho (a)				
148,295 votes · 4 days 6 hours left					
	Q 68	<b>↑</b> ↓47.2K	♥ 6,778	ſ	
	Show this thread				

Figure 11. Twitter poll in Portuguese.

Some tweets, such as those containing memes or short messages, require a previous acquisition of knowledge with regard to subtext concerning topics in question. For example, many memes, such as the ones used previously in this body of work have a subtext specific to

the audience which understand the context of the meme (examples: "One does not simply walk into Mordor" and "You don't say"), down to the verbal and rhetorical situation in which it is used.

# **Purpose: Enhancing Messages**

Because foreign language scripts such as Japanese, Chinese, Arabic, and Korean cannot be manipulated to display a message or word in "all caps," language users opt for the copious use of punctuation to emphasize emotion. Alphanumeric and Cyrillic language users (English, Spanish, Italian, Portuguese, German, and Russian, for example), on the other hand, freely and frequently make use of the cap-lock button to emphasize emotion such as rage and excitement. One such tweet, a retweet of a response to a user I follow and another user whom I do not follow, contains the following phrase– "IM SCREAMINGGGGGG" in all caps, seen in Figure 12 below. Multiple forms of digital nonverbal cues are present in this small message– the first and perhaps most obvious is the use of all caps to type the message.



Figure 12. Quoted retweet with multiple digital nonverbal cues.

The second is the use of nonverbal vocalization, which represents the elongated pronunciation or emphasis of the word "screaming." Third and perhaps least obvious of the three elements of digital nonverbal cues present in this message is the missing or inaccurate punctuation/spelling of "IM," which is, of course, supposed to be spelled "I'M." This type of digital nonverbal cue was not discussed in the literature review but is a novel concept used to express hastiness or

extreme, uncontrollable excitement by the user who purposefully misuses words, grammar, and punctuation.

A reading of Alfred M. Hitchcock's New Practice-Book in English Composition (1914) suggests that, "the exclamatory are sometimes used purely for dramatic effect...The exclamation point resembles in shape a stiletto; the exclamatory sentence sometimes stirs the feelings as a declarative could not" (p. 390). Think of it this way– simply typing the phrase correctly without caps as the following, "I'm screaming" would not be received the same way as the message typed in Figure 12 above. Instead, it may be considered sarcastic as opposed to excited through the means of conversational irony (Leech, 2014). Without the intonation and facial expressions granted in face-to-face contexts, such subtext is left up to one's experience of conversation online or worse, left to misunderstand the encounter as enthusiastic when the meaning is ambiguous or mocking (Taylor, 2015). As such, the capitalization of all letters, nonverbal vocalization, and improper use of or missing punctuation works to enhance the message rather than distract or detract from the intended purpose of messages in general.

Overall, this content analysis demonstrated that Internet users and Twitter users, more specifically, utilize many types of digital nonverbal cues to enhance their messages or tweets. In some cases, the nonverbal cue containing uploads like videos and images are the only content of the users' messages without any typed message. While the uploads alone are the outliers, most users choose to type a message in addition to supplementing messages with uploads or emoji to enhance the content of their messages.

#### **Chapter 5: Conclusion**

While not a new topic in the rhetoric and composition community, digital nonverbal cues are becoming more pervasive throughout the digital sphere, which suggests that the discussion with regard to the use of such nonverbal cues needs to be broadened. The overall understood purpose of digital nonverbal cues is to enhance the message and provoke understanding in addition to prevent misunderstanding. Moreover, an interesting aspect of the study itself is that rhetorical texts, which contain both words and images, cannot be read in isolation. This body of research has shown that Twitter's platform is an ideal demonstration of the case where such text exists, albeit in the form of tweets. It was important to review existing literature on digital nonverbal cues from a cultural dimensions perspective before analyzing and studying new tweets through a rhetorical framework because it is widely understood that the Internet is a global space where people from across the world interact. As a result of people from all over the world interacting in one space (this space being Twitter), there tend to be overlaps and great differences in the way users employ tactics of communication.

Digital nonverbal cues, in this study, can be used differently depending on the user's culture, native language, upbringing, understanding of the meaning of the cue itself, and context of the rhetorical situation. After analyzing the existing literature with regard to the text in question (digital nonverbal cues in general) through the cultural dimensions theories (Hall, 1959; Hall, 1976; Hall, 1989; Hofstede, 2011), it was necessary to review how the text operates on Twitter through a rhetorical lens which works well with digital/visual rhetoric with high regard to multiple narratives (Bizzel & Herzberg, 2001). Though Burke's Pentad, I was able to discover some other purposes behind the use of digital nonverbal cues on Twitter in addition to the distinctions of digital nonverbal cue use between users of different languages. In addition to more purposes found behind the use of digital nonverbal cues, new forms of nonverbal cues were

discovered in the study which were not previously considered. The first finding to be reviewed is the distinction of Japanese users' use of digital nonverbal cues.

# **Review of Findings**

The major finding in this body of research was that while Japanese language users are able to express more content in the condensed messaging space limited by Twitter, Japanese language users also tend to use more digital nonverbal communicational cues than their western counterparts. However, I also hypothesize that users of any cultural background who have been exposed to the Japanese language, interact with Japanese language users, use the Japanese language themselves, or have been exposed to Japanese culture may be inclined to utilize more digital nonverbal cues, especially ones which are native to Japan, such as *kaomoji*. Another unique form of digital nonverbal cue used exclusively by Japanese users is the use of single incomplete verb forms in parenthesis such as (笑) and (汗) (which mean "laugh" or "smile" and "sweat" respectively). The English equivalent, seen used only once in the study, would appear like \*laughs\*, often a signifier used in roleplay. In addition to the Japanese tending to use more digital nonverbal cues than their western counterparts, new forms of cues were discovered which were not previously considered.

One tweet in particular, translated from Brazilian Portuguese earlier in the study, utilized Twitter's capability of polling. The user took the use of the poll a little further by telling users that sharing (or retweeting) the tweet would make the poll work. The suggestion of accountability which persuades people to retweet content is a nonverbal cue appealing to *pathos* (a guilty conscience, perhaps). Another interesting tweet contained little text but an arrangement of characters which formed an image.

The agents, most often international users who used several different languages to communicate messages, often employed an unusual strategy to enhance their messages. Instead

of simply using their native languages alone to transmit the message, they often interjected small English words to enhance or perhaps emphasize their messages. Many Japanese users in addition to Spanish, Italian, and Brazilian Portuguese users employed this linguistic strategy. While perhaps not considered a digital nonverbal cue in its purest form like images, emojis, memes, and animated gifs are, the intertwining of linguistic cues used in a few messages discovered in this research was not previously considered before this study and may be native to online interaction, thus proving to be a digital nonverbal cue. Because the use of multiple languages to transmit a message is being used in this format (on Twitter), users may be employing the multilingual strategy to draw attention from other users who know the languages used or perhaps for the purpose of emphasis. Linking back to the purpose of the study, to better understand the relationship between users' digital nonverbal cue behaviors and their enhancement of messages, it seems the multiple usage of languages in a single message is either unclear, ambiguous, or limited to specific users. Multiple language use in a single message is, nevertheless, an interesting strategy for communication and rhetorical conversation.

### **Future Research**

If I had more time, I would consider dividing my research into another category which describes which kind of digital nonverbal cue is used by which language speaker. For example and addition to the native use of *kaomoji*, Japanese language speakers often used words in parentheses as digital nonverbal cues, an anomaly among other users. One such example is the use of (laughs) or (sweat) signified by ( $\mathfrak{K}$ ) and ( $\mathfrak{H}$ ) respectively. While I also counted the number of instances when each user created a tweet, I did not include this data into the final report. Further research focusing on how many times certain users message with regard to digital nonverbal cues may be an interesting endeavor. The repeated use of a nonverbal cue itself may

inherently send a different message than the single use of a nonverbal cue (such as the use of nonverbal vocalization or copious capitalization).

Future researchers may opt to record tweets using some sort of software which picks the instances of a word being used in order to narrow the scope of research (Wolff, 2015). Perhaps narrowing the research to an instance of one word being used, like a hashtag, will offer further opportunities to describe the communication between like-minded individuals (or people who share the same interest). In describing communication between similar users, a relationship may be narrated to connect how like-minded users employ digital nonverbal cues. The same sort of research can be done with reference to non-native English speakers to determine which digital nonverbal cues such users favor. Acquiring a better understanding of the forms of digital rhetorical communication favored by non-native English speakers may help bridge language barriers, transcending written text.

Studying and analyzing the relationship between Internet users' use of digital nonverbal cues and facilitating understanding is an important avenue of rhetorical research since one of the objectives of rhetoric, in its essence, is to communicate a message effectively. Alfred M. Hitchcock (1914) wrote in his New Practice-Book in English Composition, "the skilled writer knows how to gain force by making his statements brief and concise; how to gain clearness through expanding a sentence" (p. 297). In the digital age, of course, the expanding of a sentence need not be limited to written text alone but may include multimodal components of digital nonverbal cues discussed throughout this writing such as images, videos, emojis, *kaomoji*, stickers, animated gifs, and memes.

In addition to how sentence meaning can be enhanced by the use of digital nonverbal cues, this project may be useful from a communication pedagogy standpoint. If we have a better understanding of how nonverbal cues work online in mixed environments (mixed– from forums to online classrooms, to video/audio chat, and beyond), we may have a better potential to become better educators, students, project managers, and facilitators. While the like of emojis and memes may not replace formal language standards in academic writing any time soon, instructors and students may still make use of digital nonverbal cues in communicative spaces when tightening the digital proximity of classmates and instructor-to-student interaction. The study of such digital nonverbal cue use may also be necessary to better understand societal patterns and standards which ebb and flow over time, thus moving to develop a nonverbal communication theory.
## Glossary

**Emoji(s):** Widely used in many computer-mediated-contexts (CMC), emoji(s) can include anything from the smiley-face icons used in early contexts which look like– : ) (typically called emoticons) all the way to the whimsical symbols included with many smartphone devices which include anything from anthropomorphic faces to items such as fruits and buildings.

**Emoticons:** While often referred to as emoji (as mentioned above), emoticons, which make use of the alphanumeric ASCII keys available to users on a keyboard, predate the intricate emoji(s) widely used today. For example, the use of a semi-colon and the ending parenthesis will create a winking face–; ). Note that the outdated ASCII codes are used to make these images. ASCII code is limited to 128 characters.

*Kaomoji*: Japanese for "face character," (顏文字), *kaomoji* make use of the extended interface of keyboards, integrating multiple Unicode or two-byte characters to make faces, rather than restricted to ASCII characters like emoticons, which are widely used in Western languages. An example of a *kaomoji*, utilizing the Japanese *katakana* character ( $\mathcal{Y}$ ) follows- $\neg_{-}(\mathcal{Y})_{-}/$ . Unicode contains well over 135,000 characters and is used in CMC to create a multitude of the world's languages, ancient and current.

(Animated) gif(s): Often cut from movies, music videos, or YouTube videos, animated gifs represent moving frame-by-frame images which do not produce sound. Animated gifs are frequently used by Internet users as reactions to messages and demonstrations of computer graphics skills.

**Meme(s):** While the definition of this term may warrant a lengthy research project of its own, memes at their most simple denote textual representations of jokes which can reference

anything from popular cultural products to the political climate of the time during which one is created.

**Nonverbal vocalization:** Characterized by elongated words which represent the manner in which a person may say something in face-to-face (F2F) communication, nonverbal vocalization encompasses words which express emotion though the misspelling and often copious capitalization of target words. An example follows– YEEEEESSSS!! THAAAT'S what I meant!

**Cultural dimensions theory:** Including Hall's four dimensions of culture (Hall, 1959)– **the** power distance index, individualism versus collectivism, the uncertainty avoidance index, and masculinity versus femininity, all definitions which can be read in "Hall's four dimensions of culture," Geert Hofstede added two more dimensions to the theory– **long-term orientation versus short-term orientation** and **indulgence versus restraint** (2011). **Long-term orientation** cultures prioritize goals which will benefit individuals or groups in the long-term (like careers and retirement), rather than ones which prioritize **short-term goals**, goals which include can be achieved in a few days and only benefit the individual or group for a short time (some competitions and vacations). **Indulgence** culture refers to a high degree of freedom given to its people to enjoy life and satisfy human craving. **Restraint** culture, its binary, places a high control on satisfaction in daily life and limits the amount of freedom a person has to craving and gratification.

**Computer-Mediated Communication (CMC):** Computer-mediated communication is composed of any sort of communication which takes place online or through a technological interface. Forms of CMC include but are not limited to the following: texting, emailing, the use of voice over Internet protocol (VOIP), chatting (the use of chat programs) and communicating through social media platforms. **(Carter provides a good definition)**  **Face-to-Face (F2F):** Face-to-face communication is the binary to computer-mediated communication. In traditional face-to-face communicational contexts, both the speaker and listener are physically present with one another while communicating and receiving messages. Nonverbal communication such as facial expressions, gestures, and vocables are more easily perceived by both parties as a result of close physical proximity.

**Time proxemics:** While physical proximity denotes the amount of physical, measurable space exists between one thing and another (typically used with people), proxemics differs in the sense that it relates to the amount of space deemed necessary to set between people or things. In time proxemics with regard to communication, proxemics refers to the amount of time deemed necessary between the receipt of a message and response (Hall, 1976). For example: Some people do not feel comfortable responding to messages right away because the action makes them appear desperate for attention. Instead, waiting some time between the receipt of the message and response demonstrates genuine authorial intent.

Hall's four dimensions of culture: Edward Hall, a famed communication researcher and scholar, named the four dimensions of culture as following binaries- individualism (versus collectivism), masculinity (versus femininity), power distance (in reference to high- and low-power distance), and uncertainty avoidance (in reference to high-and low-uncertainty avoidance (Hall, 1959). In short, individualistic cultures focus on the success of individual people whereas collectivistic cultures focus on the success of groups or family units.
Masculinity (versus femininity) refers to a style of communication, also described in this glossary. High- and low- power distance is a reference to how much influence citizens have in government and politics. A person living in a high-power distance nation will have very little influence on politics whereas a person living in a low-power distance refers to how willing

a person is to try or immerse oneself into something unfamiliar. A person with a highuncertainty avoidance index, for example, will be far less willing to try something different. However, a person with a low-uncertainty avoidance index will be more willing to try something he/she has not tried before.

**Low-context culture:** Cultures in which primary modes of interaction involve direct, explicit, oral/aural, often verbal communication (Hofstede, 2011). Examples: The United States and Germany

**High-context culture:** Cultures in which primary modes of communication involve indirect, implicit, visual/kinesthetic, often nonverbal communication (Hofstede, 2011). Examples: South Korea and Mexico

**Polychronic:** A term popularized by researcher Edward Hall, polychronic time refers to a cultural dimension through which the importance of time is demoted by other parts of life (1989). Simply put, time does not hold a priority in polychronic cultures.

**Monochronic:** Another term popularized by researcher Edward Hall, monochronic time refers to a cultural dimension through which the importance of time is prioritized when faced with other parts of life (1989). Simply put, time is prioritized in monochronic cultures.

**Masculine (in communication-style):** Part of a binary coined by researcher Edward Hall, masculine communication is defined by direct, explicit, and often low-context communication styles (1959). Ideal masculine communicational styles include speaking in a loud, clear voice, steady eye contact, and firm posture.

**Feminine (in communication-style):** Part of a binary coined by researcher Edward Hall, feminine communication is defined by indirect, implicit, and often high-context communication styles (1959). Ideal feminine communicational styles include speaking in a

soft, gentle voice, demonstrating an approachable nature, and using positive expressions (smiling or neutral expression as opposed to grimacing) while speaking to an audience.

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