

# How Emoticons Affect Leader-member Exchange

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HOW EMOTICONS AFFECT LEADER-MEMBER EXCHANGE

by

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## **ABSTRACT**

Emoticons have been shown to be the nonverbal cues of computer-mediated communication and could therefore be a rich source of information, but they are not used in the workplace because they are considered unprofessional. This study aimed to look at the effects of emoticons on relationships, specifically between a leader and member. Participants were asked to read a fake email from a fake boss and answer several questions in regard to leader-member exchange, affective presence, perceived message positivity, perceived masculinity/femininity of the fake boss, and perceived professionalism. This study found that the use of a positive emoticon in an email message increased leader-member exchange, mediated by positive affective presence (though the use of the emoticon and positive affective presence were not linked). This study also found that when participants received a message with an emoticon, they found the sender to be both more feminine and less professional.

This is dedicated to my future self.

You're welcome.

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## **LIST OF ACRONYMS/ABBREVIATIONS**

ANCOVA	Analysis of covariance
ANOVA	Analysis of variance
CMC	Computer-mediated communication
FTF	Face-to-face
IM	Instant message
LMX	Leader-member exchange
LMX-MDM	Leader-Member Exchange Multi-Dimensional Measure
LMSX	Leader-Member Social Exchange
MUD	Multi-user dungeon
SME	Subject matter expert

## **CHAPTER ONE: INTRODUCTION**

Online communication has become an essential tool in businesses in the last decade. It allows us to communicate with a person half way around the world or a person in the cubicle next to us, send a message that can be answered later or one that needs an immediate response. Almost everyone uses computer-mediated communication (CMC), including management to employees, and vice versa. This type of communication represents a unique relationship, and CMC adds another layer to this. Namely, what we lose in CMC that we have in face-to-face (FTF) communication are nonverbal cues. The use of emoticons, loosely defined as “graphic representations of facial expressions” (Walter & D’Addario, 2001, p. 1), help substitute for, and serve part of the same functions of nonverbal cues (e.g., Derks, Bos, & von Grumbkow, 2007). There is very little research on the use of emoticons in business communication, and even less when looking from the perspective of leader-member exchange (LMX), an important variable linked to many important work outcomes (e.g. Gerstner & Day, 1997). This study aims to look at how emoticons affect employees’ perceptions of their bosses and the LMX relationship. Results from this study could provide a simple and effective way of improving leader-member relationships, especially in terms of the virtual workforce.

CMC has become an essential business tool and requires more research attention to maximize its potential uses (e.g. Herbert & Vorauer, 2003; Riggio, 2005; Byron, 2008; Derks, Bos, & von Grumbkow, 2008). More and more emphasis is placed on the virtual office, and managers are faced with the challenging question "how can I manage them if I can't see them?" (Cascio, 1999, p. 1).

The business etiquette that once was also may no longer be appropriate for today's world, as Krohn (2004) suggests, especially with the increase of Millennials (those born after 1980) flooding the workplace; the dynamics of CMC have changed over generations, and its potential may be hidden under what is considered "professional." Can the possible benefits of emoticon usage outweigh this "outdated" policy?

The most recent literature points to emoticons being the nonverbal cues of CMC (see Jibril & Abdullah, 2013). Nonverbal cues are important because they can express emotions and attitudes and can "emphasize, contradict, substitute, or regulate verbal communication" (Wei, 2012, p. 2, as cited in Jibril & Abdullah, 2013, p. 201). We also know that "emotional expressiveness relates to leadership outcomes through idealized influence" (Ilies, Curşeu, Dimotakis, & Spitzmuller, 2013, p. 10), and that idealized influence is an important dimension of transformational leadership, a form of leadership considered very effective in the literature (see Judge & Piccolo, 2004). In CMC, we are lacking the ability to express emotion, thus the use of emoticons.

Nonverbal communication holds important information during the communication process. Herbert & Voarauer (2003) concluded that feedback is considered more positive, accurate, and understood by employees when conducted FTF vs. through CMC, and that it's more effective most likely due to information being passed through nonverbal communication.

Clearly we understand the role of nonverbal cues and the role of emoticons in communication. What we are lacking is how these affect relationships in the workplace.

Understanding how these variables affect leader-member relationships is important because these relationships have a great impact on organizational outcomes.

The main objective of this study is to look at how the use of emoticons affects the relationship between leaders and members. This paper seeks to find if using a positive emoticon increases positive affective presence (“the extent to which people’s self-reported emotions are explained by who they are interacting with” (Eisenkraft & Elfenbein 2010, p. 505)). Thus, this increase in positive affect presence should increase LMX. It also aims to see if using a positive emoticon affects the perceived positivity of a message, perceived professionalism, and perceived masculinity/femininity. The latter three echo previous studies. Huang, Yen, & Zhang (2008) found that those who received instant messages (IMs) that used emoticons found the IMs to be “richer” in information. Thompson, Mullins, & Robinson (2010) found that the use of emoticons evokes different gender stereotypes and suggests that emoticons are “unprofessional.” Wolf (2000) also found differences in how each gender uses emoticons. No studies have specifically looked at LMX or affective presence when referring to emoticon usage.

## CHAPTER TWO: LITERATURE REVIEW

### Leader-Member Exchange

Leader-member exchange (LMX) is a unique measurement of leadership; instead of looking at just leader qualities, it instead focuses on the quality of the relationship between the leader and the member, and recognizes that the relationships established between leaders and each individual member may not be identical (Dansereau, Graen, & Haga, 1975; Gerstner & Day, 1997; Graen, 1976; Graen & Cashman, 1975; Graen, Novak, & Sommerkamp, 1982; Graen & Scandura, 1987; Graen & Uhl-Bien, 1991; Graen & Wakabayashi, 1994; Liden & Graen, 1980). Scandura, Graen, & Novak (1986) defined LMX as “(a) a system of components and their relationships (b) in both members of a dyad (c) involving interdependent patterns of behavior and (d) sharing mutual outcome instrumentalities and (e) producing conceptions of environments, cause maps, and value” (p. 580). LMX is based off of role theory (Graen 1976), and role theory stresses that roles are multidimensional (Katz & Kahn, 1978; Jacobs, 1971). Therefore, Dienesch and Liden (1986) proposed that LMX consisted of three “currencies of exchange.” Later, Liden & Maslyn (1998) added a fourth dimension to LMX, and thus defined them as so:

Affect: The mutual affection members of the dyad have for each other based primarily on interpersonal attraction, rather than work or professional values. Such affection may be manifested in the desire for and/or occurrence of a relationship which has personally rewarding components and outcomes (e.g., a friendship).

Loyalty: The expression of public support for the goals and the personal character of the other member of the LMX dyad. Loyally involves a faithfulness to the individual that is generally consistent from situation to situation.

Contribution: Perception of the current level of work-oriented activity each member puts forth toward the mutual goals (explicit or implicit) of the dyad. Important in the evaluation of work-oriented activity is extent to which a subordinate member of the dyad handles responsibility and completes tasks that extend beyond the job description and/or employment contract; and likewise, the extent to which the supervisor provides resources and opportunities for such activity.

Professional Respect: Perception of the degree to which each member of the dyad has built a reputation, within and/or outside the organization, of excelling at his or her line of work. This perception may be based on historical data concerning the person, such as: personal experience with the individual; comments made about the person from individuals within or outside the organization; and awards or other professional recognition achieved by the person. Thus it is possible, though not required, to have developed a perception of professional respect before working with or even meeting the person (pg. 50)

Liden, Sparrow, and Wayne (1997) grouped the LMX antecedent variables into four categories: subordinate characteristics, leader characteristics, interactional variables, and contextual variables. Martin, Epitropaki, Thomas, & Topakas (2010) grouped LMX outcome

variables based on Gerstner and Day's (1997) review into three categories: attitudes and perceptions, behaviors, and task performance.

Based on the information above, it is hypothesized that the use of emoticons will affect LMX via affect and professional respect.

Communication is important when building relationships. Nonverbal behaviors such as facial expressions and body movements are crucial to the leader-member relationship (Burgoon, Buller, & Woodall, 1996, as cited in Teven, 2007). This nonverbal immediacy is a way for leaders to increase interpersonal affect with their subordinates (Teven, 2007). Research has shown that students are more likely to engage with their instructors outside the classroom when nonverbal immediacy is present (Fusani, 1994). If leaders (especially more virtual leaders) are using positive emoticons (thus increasing their nonverbal immediacy), we could potentially see an increase in leader-member affect, and therefore LMX.

Emoticons are considered unprofessional and people are advised not to use them in a business setting. Because "professional respect" impressions can be made even before meeting someone, and because they are considered unprofessional, the researcher believes there will be a decrease in the level of professional respect, but not so much as to counteract the increase in affect. Although emoticons are still considered unprofessional, they are more common to and more in-use by younger generations (Krohn, 2004). Therefore the use of emoticons in today's setting may not have the strong impact others might expect, but it still might be present.

There is little research or evidence that shows how positive affect affects contribution or loyalty. Research *has* shown that when there are similarly higher levels of agreeableness (based



on the Big Five) between leaders and subordinates, there are higher levels of contribution and loyalty between the two (Ryan, 2009). There is also evidence to show that co-workers who give social support receive it in return (Bowling, Beehr, & Swader, 2005). These studies show that intangible “goods” can be and are being exchanged in the workplace, and that positive affect (if correlated with, or of similar nature to, agreeableness) could be linked to contribution and loyalty when measuring LMX. But there’s too little evidence to show that positive affect affects contribution and/or loyalty, and therefore the researcher is unsure what effect (if any) emoticons will have on those dimensions.

A meta-analysis conducted by Gersnter and Day (1997) found “significant relationships between LMX and job performance, satisfaction with supervisor, overall satisfaction, commitment, role conflict, role clarity, member competence, and turnover intentions” (p. 827). Increasing LMX leads to better outcomes in all of these areas, goals that (theoretically) all organizations strive for. Therefore being able to increase LMX is something that all organizations would want to do. The results of this study could provide a way to do this.

### Emoticons

Emoticons have been defined by many researchers in the past decade. Rezabek and Cochenour (1998) defined emoticons as “visual cues formed from ordinary typographical symbols that when read sideways represent feelings or emotions” (p. 201). Walther and D’Addario (2001) described them as “graphic representations of facial expressions” (p. 324). Danesi (2009) said emoticons are a “string of keyboard characters that, when viewed sideways

(or in some other orientation), can be seen to suggest a face expressing a particular emotion” (p. 110). Examples of emoticons are :) , :-), =), :( , :-( , =( , ;) , ;-). The literature is starting to differentiate between emoticons and “smilies.” Ganster, Eimler, & Krämer (2012) identify emoticons by “character strings” and smilies as “graphical pictograms.” A smilie looks like this ☺ or ☹ (it’s interesting to note that Microsoft Word 2010 automatically turns an emoticon smile “:)” into a smilie). In that same study, Ganster et al. found that there is no difference in message interpretation between emoticons and smilies, but smiling smilies end up having a stronger impact on personal mood and therefore “elicit a stronger impact than emoticons” (p.226). For the purposes of this study, this paper will focus on emoticons because they are available to all keyboards based on ASCII, whereas smilies may only be available via certain programs. It’s also good to briefly acknowledge the cultural differences of emoticons and emoticon usage. The “sideways emoticons” are more popular to Western cultures, but Eastern cultures, such as Japan, have a completely set of emoticons (in Japan, known as *kaomoji*) and have different cultural references and usage (Katsuno & Yano, 2002).

Derks, Bos, & von Grumbkow (2007) stated that “emoticons resemble facial nonverbal behavior” (p. 379). Luor, Wu, Lu, & Tao (2010) emphasized the contraction of “emotion” and “icon” and how an emoticon is “a creative and visually salient way” to add emotion and expression into a text-based message (p. 890). As stated previously, Jibril & Abdullah (2013) summarized emoticon literature and concluded that emoticons are the nonverbal cues that text-based CMC is/was lacking. Emoticons can also be thought of as an illocutionary force. Illocution focuses on the intent of the speaker and not necessarily what is literally being said. It acts as a

clue for the receiver of the message on how to interpret said message (Dresner & Herring, 2010).

For example, in that same paper, Dresner & Herring stated:

In the following public e-mail post to the AoIR mailing list, the winking smiley is used to indicate that the utterance that immediately precedes it is not intended as a serious summons of the (deceased) media scholar Marshall McLuhan, but rather as a joke:

Paging Mr.McLuhan....:)

The winking emoticon here is best conceived of as a sign of the force of what has been (textually) said, rather than as an indication of emotion (p. 256).

Emoticons, as established previously, are primarily used to express emotion in CMC. The same regions of the brain are used when we read emoticons as when we see nonverbal cues (Yuasa, Saito, & Mukawa, 2011). They have been found to be able to strengthen a message, clarify or emphasize feelings, soften a negative tone, and/or express humor (Derks, Bos, & von Grumbknow, 2007; Derks, Bos, & von Grumbknow, 2008). Lo (2208) has found that using an emoticon (compared to not using one) affected the reception of emotion, attitude perception, and attention of the receiver. As stated before, messages that utilize emoticons were perceived to be “richer” in information, and they allow the sender to be more efficient and effective in their message (Huang et al., 2008). But, Luor et al. (2010) found that the use of emoticons in unnecessary circumstances did not add anything to the message, which echoes Walther and D’Addario’s (2001) findings that the emoticons’ impact decreased with overuse or unnecessary use.

Luor et al.'s study is notable here because they studied IMs in the workplace. They found that "positive emoticons significantly enhanced emotion when...discussing and coordinating tasks," and therefore they suggest that "positive emoticons should always be employed in work coordination tasks, especially when there is a tendency for unpleasant emotions to be felt..." (p. 894). This, along with Lo's study, is significant because these results show that there is a change in the *receiver*, either within his/herself or how he/she reacts. Another study by Utz (2000) found that, in online multi-user dungeon (MUD) games (a game type that is usually text-based and has multiple users in real time), the use of emoticons and other game-related cues were significant predictors of relationship formation.

Gender is a variable that has been studied when it comes to the use of, and impression made by, emoticons. There is mixed research as to which gender uses emoticons more often. Wolf (2000) and Lee (2003) both concluded that men used little to no emoticons when conversing with other men, but when conversing with women, men used more emoticons to match that of their counterparts. Although these studies and others (e.g. Luor, et al., 2010) suggest that women use emoticons more, Huffaker and Calvert (2005) analyzed online blogs and found that men used more emoticons than women did. Wolf (2000) also found that women used emoticons mainly to express humor, whereas men used them to express sarcasm. Gender and masculinity/femininity has also been looked at in the context of the workforce, specifically personnel selection. Using emoticons was found to portray stereotypical feminine qualities such as warmth. This, in turn, lead applicants using emoticons to be perceived as less competent and lower in stereotypical masculine attitudes and behaviors (e.g. leadership) when applying to male-

gender-typed jobs. This also led to a lower starting pay rate for those applicants using emoticons (Thompson, Mullins, & Robinson, 2010).

All of these findings show that emoticons have an effect on the message being sent and effects on the receiver of the message. But, the literature is lacking more research on the relationship differences between those that do and do not use emoticons, especially from a leader-member perspective in the workplace. There is also little to no research on the receiver's perceptions of the sender other than masculinity/femininity. This study would add these missing factors. It is therefore hypothesized that, because of their effectiveness, the use of emoticons will lead to clearer communication and a greater exchange of positive affective presence, leading to higher quality LMX. It's also believed that, due to emoticons' "warm" qualities, receivers of the emoticon messages will perceive their leader to be more feminine.

### Nonverbal Communication

Nonverbal cues are those that we perceive outside of what is actually being said to us (either verbally or in text). Examples of nonverbal cues are differences in voice tone, facial expressions, hand gestures, etc. As stated before, the main functions of nonverbal cues are to convey emotions and attitudes and to "emphasize, contradict, substitute, or regulate verbal communication" (Wei, 2012, p. 2, as cited in Jibril & Abdullah, 2013, p. 201). We try to seek out these nonverbal cues to provide us with more information. How does this happen? Facial expressions are a prime example of how these behaviors can provide communicative information. Frith (2009) provided a great example:

At first, the facial expression of fear has direct behavioural advantages for the actor, since widening the eyes for example, increases the visual field, thereby increasing the likelihood of detecting signals of danger. This expression then becomes public information that observers can use as a signal to be vigilant. In the next step, the actor becomes able to control the sending of a signal that was previously emitted inadvertently. Through such control he can express sorrow and embarrassment as a means of appeasing aggression in others. Finally, both the actor and the receiver become aware that they are exchanging signals and that these can be used for deliberate communication. At this stage, the signals need no longer be tied to their original behavioural function. They can be arbitrarily related to meaning, making the development of language possible (p. 3457).

Research has acknowledged the lack of nonverbal cues in CMC and the disruptiveness it causes in communication (e.g. Kiesler, 1984; Walther, 1992; Walther, Slovacek, & Tidwell, 2001). Emoticons are filling that missing gap as CMC's nonverbal cues. This is due to the Social Information Processing Theory (Walther, 1996; Walther, 1992) that states people will try and compensate for missing communication cues via proxy cues. Channel expansion theory (Lo, 2008) explains how people learn how to use emoticons when communicating through CMC; channel expansion theory states that, after communicating in a certain medium for some time, the user learns specific skills and gains knowledge to assist communication in that medium.

Nonverbal communication has been studied in the context of the workplace and in leadership. Three things are notable in this literature: one, feedback in a F2F situation is more positive and accurate, two, even though CMC lacks generally lacks verbal cues, emoticon still

comes through this medium, and three, nonverbal communication is an important part of leadership.

Several studies have found that feedback in a F2F situation is more positive and accurate and can influence outcomes in different ways. Nonverbal cues significantly affect the results of interview processes (e.g. Chapman & Rowe, 2001; Connerly & Rynes, 1997; Liden, Martin, & Parsons, 1993). For example, Liden et al. (1993) found that interviewers' body language affected how well applicants did as they were rated by objective judges; applicants who had interviewers with "warm" body language did better than those applicants whose interviewers appeared "cold." Other feedback is also affected by nonverbal cues and CMC. Herbert and Vorauer (2003) found that F2F evaluations were found to be more positive than CM evaluation, and, when referring to task-relevant information, more accurate. They concluded that these results were due to the receivers' access to nonverbal cues; these cues provided a higher quality of evaluation. Kurtzberg, Naquin, & Belkin (2005) found that employees gave more negative evaluations of their peers over email compared to those given in paper form. This was mediated by the fact that employees felt a lesser sense of social obligation when filling out email evaluations. Whether the ratings were more accurate was unknown. Potentially the email evaluations could have been more accurate, offering a counter to Herbert and Vorauer, and making a case as to why email evaluations might be better for honesty. But, their case shows us that F2F (and therefore nonverbal cues) help give a more positive feel to evaluations while still remaining accurate. We know that employees feel that it's difficult to portray positivity in emails (Markus, 1994), especially due to the nature of what they are talking about (e.g. tasks) and in the

manner in which they confer (e.g. with a “serious” tone) (Lea & Spears, 1991). Even happier messages are often dulled by the lack of nonverbal cues (Byron, 2008). Emoticons can be that missing link, taking advantage of the best parts of both communication mediums. The evaluation process is an important part of the supervisor-subordinate relationship and represents an area where a supervisor can energize and motivate their employees, so having a positive impact is important (Riggio, 2005).

Despite the lack of cues allowing for emotional information in CMC, emotion is still passed through CMC, leading to miscommunication (Byron, 2008). In a study by Byron and Baldrige (2005), a focus group reported expressing and receiving emotions in work email, and almost all of them said they had issues doing so. This same focus group also listed contradictory or disagreeing ways to express positive emotion in emails (e.g. sending longer or shorter messages, using or not using exclamation points). Clearly there is no consistency in “emotional typing” and it’s causing miscommunication. Emoticons, which mimic facial expressions, are a much more consistent (albeit not perfect) system of nonverbal communication. Its use could (does) more easily portray positivity and decrease the misinterpretation of plain text.

Burgoon et al. (1996) (as cited in Teven, 2007) acknowledged nonverbal behaviors as important to the leader-member relationship because they are important and central to interpersonal interactions. Ilies, Curşeu, Dimotakis, and Spitzmuller (2013) found that leadership outcomes are related to emotional expressiveness via idealized influence; they also found that relational authenticity was very important when it came to influencing others. Exchanges of emotional expressiveness between leaders and members led to higher idealized influence, which



affected members' perceptions of leader effectiveness and the reported effort members put forth in their work. Recognizing the emotional part of leadership does not only address the "affect" part of LMX, but also addresses transformational leadership. Idealized influence (a.k.a. charisma) is one of the four areas that comprise transformational leadership (Purvanoca & Bono, 2009). Transformational leadership has been documented as an important part of virtual teams (Avolio et al., 2001; Ruggieri, 2009). It's been shown that those leaders that engage in transformational leadership achieve higher team performance levels (Purvanoca & Bono, 2009). As stated previously, Teven (2007) also found nonverbal immediacy, described as a mix of behaviors that enhance the perceived closeness in relationships (Mehrabian, 1969), helps to increase affect between supervisors and subordinates and leads subordinates to have more credible perceptions of their supervisors. Other research has shown that when leaders hold positive expectations of their employees, worker productivity increases; these expectations are demonstrated both verbally and nonverbally (Eden, 1990, 1993; Eden & Shani, 1982). Nonverbal communication has its impact in leadership, and we need to better understand the nonverbal communication possible in CMC as our workplace becomes more virtual.

### Professionalism

Emoticons are considered unprofessional, and it's standard practice to teach against the use of them in a business setting. Several scholars cited that, while emoticons may be okay in personal emails, they would view a business email with emoticons as less professional and advise against them (Seaton, 2011). As stated previously, Thompson et al. (2010) found that the

use of emoticons can lead to a decrease in pay, and thus they have warned against the use of emoticons when applying to certain types of jobs. It's almost hypocritical to talk about how much body language plays an important role in business and business relationships, but then completely wipe out that aspect when referring to CMC. We know that smiling has many positive effects (Guéguen & De Gail, 2003) and would encourage employees to smile at clients F2F. Yet we are saying the same does not apply when using CMC. This is a stigma that this study will hopefully help to reverse so that people can take advantage and reap the benefits of using emoticons in all types of CMC.

### Hypotheses

Based on the above review, the following hypotheses were made:

H1: There will be greater positive affective presence with the use of positive emoticons than without the use of emoticons.

H2: LMX will be higher with the use of positive emoticons than without the use of emoticons, mediated by positive affect.

H2a: There will be a higher affect score under LMX with the use of positive emoticons than without the use of emoticons.

H2b: There will be a lower professional respect score under LMX with the use of positive emoticons than without the use of emoticons.

H2c: There will be no difference in loyalty score under LMX with the use of positive emoticons than without the use of emoticons.

H2d: There will be no difference in contribution score under LMX with the use of positive emoticons than without the use of emoticons.

H3: The message sent will relay more positivity with the use of positive emoticons than without the use of emoticons.

H4: The receivers will believe the leader is more feminine with the use of positive emoticons than without the use of emoticons.

H5: The receivers will consider the leader less professional with the use of positive emoticons than without the use of emoticons.

Hypotheses 1, 2, 2a, and 3 are all based around the same principals. The use of emoticons allows emotional information to pass through CMC, increasing positive affective presence and perceived closeness. Therefore it's hypothesized there will be an increase in positive affect (H2a), an increase in the positivity that is perceived by the receiver (H3), an increase in how much the sender is affecting the receiver's emotions positively (H1), and an increase in overall LMX (H2). It is expected that no difference will be seen in loyalty (H2c) and contribution (H2d) scores between groups due to a lack of connection with positive affect and these dimensions. Because emoticons are still stigmatized as unprofessional, it's hypothesized that receivers will feel their leader who uses emoticons as less professional (H2b, H5). Lastly, emoticons evoke the receiver to perceive stereotypically feminine qualities; hence, it's hypothesized that the receivers will think their leader is more feminine (H4).

## CHAPTER THREE: METHODOLOGY

### Participants

Participants were recruited through several sources. Participants were made up of undergraduate and graduate students, members of the professional social networking site LinkedIn ([www.linkedin.com](http://www.linkedin.com)), and of workers from Amazon.com's website Mechanical Turk ([www.mturk.com](http://www.mturk.com)). This last site allows users to anonymously complete tasks (such as surveys) for a monetary reward (if offered). Tasks are submitted to the website and posted to a list that participants (called "Workers" on the site) can access. Participants can complete tasks if they choose to. Participants have no incentive to complete the survey other than the pay they will receive. In order to participate in the survey, participants had to pass three prescreening questions: Do you currently reside in the United States? Have you resided in the United States for at least the past 7 years? Were you ever employed in the United States (for at least 12 months)? These questions ensured that the sample was familiar with US culture and US work culture.

In total, there were 83 responses that were complete or almost complete. Participants ranged in age from 19 to 61, with a median age of 33.5. There were 47 females, 30 males, and 6 unidentified.

## Procedure

Participants completed an online survey. The participants were instructed to read a fake email from a fake boss, and then to answer several questions regarding the email/the boss. The participants were told that this survey was looking at “messaging employees in a virtual setting” because letting participants know that the survey was really investigating emoticons might have biased their responses. They were debriefed after completing the survey. This was a 2x2 design, for a total of four conditions.

The first set of emails was called the “Intro.” The participant was told that he/she has just accepted a position at Financial Corp, and that this was an email he/she received from his/her boss. Below is the experimental Intro condition email:

Hello,

Welcome to the company. I’m sorry I wasn’t able to personally meet you during your onboarding. Please plan on attending next Monday’s meeting about the new upcoming project. I will see you then :).

-Jordan Taylor

The control condition has the same email, just without the happy face emoticon.

The second set of emails was called “Task.” The Task email set was created in order to hone in on the LMX dimensions of contribution and loyalty, something that the Intro set of emails lacked. The participant was told that he/she has been an employee of Financial Corp for six months, and that this was an email he/she received from his/her boss. Below is the experimental task email:

Hello,

I know you already completed your part of the ARIS project, but the clients recently asked if we could create additional reports. Would you be willing to complete these for me? :)

- Jordan Taylor

Like the control Intro email, in the control Task email, there is the same exact message but without a happy face emoticon. All messages were evaluated by a group of subject matter experts (SMEs, made up of I/O masters) for positivity and the gender neutral-ness of the boss' name. Since message positivity was to be measured, it was important that both email messages were not strongly negative or strongly positive. Both messages were rated as neutral or only slightly positive by the SMEs. The SMEs also collaborated to develop a name that was considered gender neutral and in the middle of the masculine-feminine scale, and they determined that all questions unique to this study were measuring what they intended to measure.

## Measurements

### Leader-Member Exchange (LMX)

LMX was measured via the multi-dimensional measure of LMX, the LMX Multi-Dimensional Measure (LMX-MDM) by Liden and Maslyn (1998). Liden and Maslyn (1998) found that their scale might explain incremental variance beyond what LMX-7 can explain in some of the outcome variables. The LMX-MDM also provides the opportunity to specifically

look at each dimension of LMX separately. The leader-member social exchange (LMSX) scale recently developed by Bernerth et al. (2007) was also used to supplement the LMX-MDM. Their research found that neither scale (LMX-MDM and LMX-7) accounted enough for “social exchanges,” things that might lead to quality relationships. Since this study has to do with communication, this scale was an appropriate additive.

### Positivity and Affective Presence

Positivity, defined here as “the extent to which the message is perceived as positive,” will be measured by one, Likert-scale question:

On a scale of 1-7, with 1 being “Not positive at all,” 4 being “Neutral,” and 7 being “Extremely positive,” how would you rate the positivity of the email you received?

Because the email itself is to be considered “neutral,” this one question was determined to be able to capture the possible change in responses due to the use of an emoticon.

Affective presence, defined as “emotions that people tend to elicit in others” (Eisenkraft & Elfenbein, 2010, p.505) was measured via the PANAS-T, reworded to reflect how the participant feels based off how his/her new boss is/will make the participant feel. The PANAS-T consists of 22 emotions (11 positive affect, 11 negative affect) and is scored on a 1-5 scale for each emotion, 1 being “Very slight or not at all” and 5 being “Extremely.”

### Perceived Masculinity/Femininity

Perceived masculinity/femininity will be measured by one question:

“How masculine/feminine do you perceive your supervisor at Financial Corp to be?”

The answer format was a modified 7-point Likert-scale, with “masculine” being on one end and “feminine” being on the other. Because there is no other information available (e.g. a picture) other than a gender-neutral name, it was determined that this one question would capture the possible difference due to the emoticon.

### Professionalism

Professionalism, defined here as “the extent to which one perceives his/her boss as professional” will be measured by one, Likert-scale question:

On a scale of 1-7, with 1 being “Not professional at all,” 4 being “Neutral,” and 7 being “Extremely professional,” how would you rate the professionalism of your boss?

Because there is no other information available to the participant other than this “lean” email message (e.g. appearance of boss), it was determined that this one question would capture the possible difference due to the emoticon.



## CHAPTER FOUR: RESULTS

(\*Note: Because the results for the LMX-MDM and the LMSX led to the same outcomes, and because they were correlated so highly (.87), LMSX was not included in the final analyses.) A one-way between-subjects analysis of variance (ANOVA) was conducted to compare the effects of positive emoticons on LMX between the experimental and control conditions. There was no significant effect ( $F(1, 77) = 2.93, p = .09; d = .39$ ) of the use of emoticons on LMX. An analysis of covariance (ANCOVA) was conducted to test for the mediation of positive affective presence on the emoticon-LMX relationship. Positive affect was shown to mediate this relationship ( $F(1, 75) = 40.00, p = .00$ ). But, an additional ANOVA conducted showed that there was no significant difference ( $F(1, 80) = 1.65, p = .20$ ) between conditions (experimental vs. control) in regards to positive affective presence.

Three independent-samples, 1-tailed, t-tests were run to determine the effects of the emoticons. The first t-test (see Table 1) compared the experimental condition (both the Intro and Task messages that used emoticons) to the control condition. LMX-MDM was significantly higher ( $t(77) = 1.71, p = .05$ ) where emoticons were used than without emoticons. For the dimensions of the LMX-MDM, only loyalty was significantly higher ( $t(79) = 1.86, p = .03$ ) for the experimental condition vs. the control condition. Affect ( $t(81) = .58, p = .28$ ), contribution ( $t(79) = 1.20, p = .12$ ), and professional respect ( $t(80) = .99, p = .16$ ) were all not significant. Perceived positivity of the message was not significant ( $t(76) = 1.36, p = .09$ ) for the experimental condition, nor was positive affective presence ( $t(80) = 1.29, p = .10$ ). Perceived masculinity/femininity was significant ( $t(79) = 2.58, p = .01$ ), with those in the experimental

condition perceiving their fake boss to be more feminine. Professionalism was also significant ( $t(78) = -2.10, p = .02$ ), with those experimental condition perceiving their boss to be less professional.

Table 1: Overall Experimental vs. Control Condition

*Overall Experimental vs. Control Condition*

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Dependent Variables	Condition	Mean	SD	F	t	df	Sig. (1-tailed)
LMX-MDM	E	61.53	13.59	.52	1.71	77	.05**
	C	56.51	12.37				
LMX Affect	E	14.16	3.53	.10	.58	81	.28
	C	13.72	3.42				
LMX Loyalty	E	15.03	3.92	1.24	1.86	79	.03**
	C	13.56	3.19				
LMX Contribution	E	16.14	3.91	.46	1.20	79	.12
	C	15.13	3.66				
LMX Professional Respect	E	15.03	4.23	2.54	.99	80	.16
	C	14.17	3.59				
Perceived Positivity	E	5.06	1.15	.002	1.36	76	.09
	C	4.73	1.00				
Positive Affective Presence	E	33.57	11.99	1.36	1.29	80	.10
	C	30.38	10.46				
Perceived Masculinity/Femininity	E	4.26	1.72	1.30	2.58	79	.01**
	C	3.37	1.37				
Perceived Professionalism	E	4.06	1.65	1.73	-2.10	78	.02**
	C	4.78	1.43				

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Note: \*\* $p \leq .05$

The second t-test (see Table 2) looked at just the Intro group and compared emoticons to no emoticons. LMX-MDM was significantly higher ( $t(38) = 1.96, p = .03$ ) where emoticons were used than without emoticons. For the dimensions of the LMX-MDM, both loyalty ( $t(38) =$

2.43,  $p = .01$ ) and professional respect ( $t(38) = 2.33, p = .01$ ) were significantly higher for the emoticon group. Affect was not significant ( $t(38) = 1.58, p = .06$ ), nor was contribution ( $t(38) = .79, p = .22$ ). Perceived positivity of the message was not significant ( $t(35) = 1.50, p = .07$ ) for the emoticon group, nor was positive affective presence ( $t(38) = 2.42, p = .01$ ). Perceived masculinity/femininity was significant ( $t(37) = 1.74, p = .05$ ), with those in the emoticon group perceiving their fake boss to be more feminine. Professionalism not significant ( $t(36) = -.68, p = .25$ ).

Table 2: Intro Group - Experimental vs. Control Condition

<i>Intro Group: Experimental vs. Control Condition</i>							
Dependent Variables	Condition	Mean	SD	F	t	df	Sig. (1-tailed)
LMX-MDM	E	61.88	16.05	4.04	1.96	38	.03**
	C	53.71	10.42				
LMX Affect	E	14.63	4.08	2.33	1.58	38	.06
	C	12.75	3.40				
LMX Loyalty	E	15.44	4.37	5.86	2.43	38	.01**
	C	12.79	2.52				
LMX Contribution	E	15.94	4.33	1.73	.79	38	.22
	C	14.96	3.47				
LMX Professional Respect	E	15.88	4.23	8.90	2.33	38	.01**
	C	13.21	2.81				
Perceived Positivity	E	5.21	1.37	.61	1.50	35	.07
	C	4.61	1.08				
Positive Affective Presence	E	37.63	12.69	1.00	2.42	38	.01**
	C	29.04	9.57				
Perceived Masculinity/Femininity	E	3.80	1.97	2.20	1.74	37	.05**
	C	2.88	1.36				
Perceived Professionalism	E	4.14	1.46	.62	-.68	36	.25
	C	4.50	1.62				

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*Note: \*\*p ≤ .05*

The third t-test (see Table 3) looked at just the Task group and compared emoticons to no emoticons. LMX-MDM was not significant ( $t(37) = .37, p = .36$ ) nor were any of its dimensions. Perceived positivity of the message was not significant ( $t(39) = .31, p = .38$ ), nor was positive affective presence ( $t(40) = -.42, p = .34$ ). Perceived masculinity/femininity was significant ( $t(40) = 1.68, p = .05$ ), with those in the emoticon group perceiving their fake boss to be more feminine. Professionalism was also significant ( $t(40) = -2.36, p = .01$ ), with those in the emoticon group perceiving their boss to be less professional.

A control t-test was also conducted to compare the Intro and Task group. Theoretically there should be no differences between the groups, but there was one; those in the Task group perceived their fake boss to be significantly more feminine than the Intro group ( $t(79) = -.300, p < .01$ ). Also, neither age nor sex were significant factors.

Table 3: Task Group - Experimental vs. Control Condition

<i>Task Group: Experimental vs. Control Condition</i>							
Dependent Variables	Condition	Mean	SD	F	t	df	Sig. (1-tailed)
LMX-MDM	E	61.22	11.44	.74	.37	37	.36
	C	59.71	13.84				
LMX Affect	E	13.81	3.11	.08	-1.00	41	.16
	C	14.77	3.18				
LMX Loyalty	E	14.70	3.60	.24	.24	39	.41
	C	14.43	3.70				
LMX Contribution	E	16.32	3.64	.02	.84	39	.20
	C	15.32	3.93				
LMX Professional Respect	E	14.35	4.03	.00	-.70	40	.24
	C	15.23	4.09				
Perceived Positivity	E	4.95	1.00	.09	.31	39	.38
	C	4.86	.91				
Positive Affective Presence	E	30.48	10.73	.00	-.42	40	.34
	C	31.90	11.29				
Perceived Masculinity/Femininity	E	4.60	1.47	1.19	1.68	40	.05**
	C	3.91	1.19				
Perceived Professionalism	E	4.00	1.81	10.36	-2.36	40	.01**
	C	5.09	1.15				

Note: \*\* $p \leq .05$

## CHAPTER FIVE: CONCLUSION

### Discussion

H1: There will be greater positive affective presence with the use of positive emoticons than without the use of emoticons.

Hypothesis 1 was partially supported. In the overall experimental vs. control conditions and in the Task group, positive affective presence was not significant. But in the Intro group, positive affective presence was significantly higher for those in the experimental condition. Upon further investigation, a two-way ANOVA concluded that there is a significant interaction effect ( $F(1, 78)$ ,  $p = .05$ ) of experimental/control and Intro/Task. This echoes the Luor et al. (2010) study that certain messages were more affected by the use of an emoticon vs. other messages.

H2: LMX will be higher with the use of positive emoticons than without the use of emoticons, mediated by positive affect.

Since Hypothesis 1 was not supported, Hypothesis 2 was not supported. Positive affective presence *did* mediate the relationship between the use of positive emoticons and increased LMX, but the use of emoticons was not completely linked to positive affective presence. So, the difference in LMX seen between the experimental and control conditions may not be due to the use of emoticons. The difference is not due to the Intro/Task emails, because there was no significant difference in LMX between those groups. Since there is a moderate effect size (.39), the researcher is hesitant to completely rule out emoticons as a possible affecting variable. More research should be conducted to investigate this relationship.

H2a: There will be a higher affect score under LMX with the use of positive emoticons than without the use of emoticons.

Hypothesis 2a was not supported. There was no difference in LMX affect between the experimental vs. control condition; though for the Intro group, the difference in affect was almost significant ( $p = .06$ ).

H2b: There will be a lower professional respect score under LMX with the use of positive emoticons than without the use of emoticons.

Hypothesis 2b was not supported. There was no difference in LMX professional respect between the experimental vs. control condition and specifically in the Task group. Emoticons did not reduce the professional respect participants felt towards their fake boss. But, LMX professional respect was actually found to be *higher* for the experimental vs. control condition in the Intro group. This may have occurred because participants wanted to show that they had respect for their fake boss since they were new to the position (social desirability bias).

H2c: There will be no difference in loyalty score under LMX with the use of positive emoticons than without the use of emoticons.

Hypothesis 2c was not supported. LMX loyalty was significant, with loyalty being higher in the experimental condition. This was also true for the Intro group but not the Task group. This result was surprising, and further research should be conducted to investigate this result.

H2d: There will be no difference in contribution score under LMX with the use of positive emoticons than without the use of emoticons.

Hypothesis 2d was supported. There was no difference in LMX contribution score

between the experimental and control conditions.

H3: The message sent will relay more positivity with the use of emoticons than without the use of emoticons.

Hypothesis 3 was not supported. Participants in the experimental condition did not perceive the email message to more positive with an emoticon than participants in the control condition. But, since message positivity was *close* to significant (.09), the researcher believes that this hypothesis should be further investigated.

H4: The receivers will believe the leader is more feminine with the use of positive emoticons than without the use of emoticons.

Hypothesis 4 was supported. In the overall experimental condition, the experimental Intro group, and experimental Task group, participants perceived their fake boss to be more feminine than masculine. This is in line with previous research (e.g. Thompson et al. (2010)). Also, the participants in the Task group perceived their fake boss to be significantly more feminine than the Intro group. This could just be a result of individual differences, since the name was determined to be gender-neutral, and there was no interaction effect of experimental/control and Intro/Task on perceived masculinity/femininity, though more research could be conducted to further the investigation.

H5: The receivers will consider the leader less professional with the use of positive emoticons than without the use of emoticons.

Hypothesis 5 was supported. Participants in the overall experimental condition and in the experimental Task group perceived their fake boss to be less professional. In the Intro group,



there was no significant difference in perceived professionalism between the experimental and control conditions. This could once again be due to the social desirability bias. Since age was not a significant factor, this shows that across the general population, emoticons are still viewed as unprofessional.

Overall, this study opens the doors to further research about emoticons in the workplace. The use of positive emoticons may be linked with increased LMX, increased message positivity, and increased positive affective presence. This study strengthens previous claims that emoticons evoke a feminine stereotype, and that emoticons can make one seem less professional. This study starts the conversation about the possible acceptance of using emoticons in a more business/formal setting because of their potential benefits. This is especially important due to the growing virtual workplace.

### Limitations and Future Research

There are a few limitations to this study. This study has low fidelity; this was an experimental setting, and there was no “real job” or “real boss,” and therefore there were no real relationships to measure. Along with the study design, the participants might have been confused by the survey and could have potentially completed the questions thinking about their *actual* boss and not have answered the questions based off of their fake one. The study population was also not ideal. Although the prescreening questions attempted to limit the survey to US participants and participants who’ve worked at least a year in the United States, the best

population would be persons currently working in the United States where CMC is a main mode of communication.

This study and its results lead to many different research questions and projects. Future research could attempt to address these hypotheses through a different experimental or survey set up. It would be interesting to do a correlational study or to look at relationships among colleagues who use or don't use emoticons. This study could also be replicated with different emoticons, different subject content, and/or a difference in the frequency of emoticons. For example, how would the results change if there was also a sad face emoticon in the email? Or if there was a wink face emoticon at the end instead of a smiley face? What happens if the number of emoticons used per message increased? As previous literature has stated, there is a lack of information about emoticon usage and computer-mediated nonverbal communication on affecting work relationships. Any further research that stems from this study would help fill in the gap.

## **APPENDIX A: SCALES**

LMX-MDM and LMSX

On a scale of 1 to 7, with 1 being “Strongly Disagree” and 7 being “Strongly Agree,” please answer the following statements:

LMX-MDM	Strongly disagree			Neither agree or disagree		Strongly agree	
I like my supervisor very much as a person.	1	2	3	4	5	6	7
My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question.	1	2	3	4	5	6	7
My supervisor would come to my defense if I were “attacked” by others.	1	2	3	4	5	6	7
My supervisor is the kind of person one would like to have as a friend.	1	2	3	4	5	6	7
My supervisor is a lot of fun to work with.	1	2	3	4	5	6	7
My supervisor would defend me to others in the organization if I made an honest mistake.	1	2	3	4	5	6	7
I respect my supervisor’s knowledge of and competence on the job.	1	2	3	4	5	6	7
I am willing to apply extra efforts, beyond those normally required, to meet my supervisor’s work goals.	1	2	3	4	5	6	7
I do work for my supervisor that goes beyond what is specified in my job description.	1	2	3	4	5	6	7
I am impressed with my supervisor’s knowledge of his/her job.	1	2	3	4	5	6	7
I admire my supervisor’s professional skills.	1	2	3	4	5	6	7
I do not mind working my hardest for my supervisor.	1	2	3	4	5	6	7

LMSX	Strongly disagree		Neither agree or disagree		Strongly agree	
	1	2 3	4	5 6	7	
If my manager does something for me, I will return the favor at some point.	1	2 3	4	5 6	7	
My manager and I have a two-way exchange relationship.	1	2 3	4	5 6	7	
I do not have to specify the exact conditions to know my manager will return the favor.	1	2 3	4	5 6	7	
If I do something for my manager, he or she will eventually repay me.	1	2 3	4	5 6	7	
I give more than I take with my supervisor.	1	2 3	4	5 6	7	
My opinion has an influence on my manager, and his or her opinion has an influence on me.	1	2 3	4	5 6	7	
When my supervisor gives me support, I feel I owe it to him or her to return the favor.	1	2 3	4	5 6	7	
My efforts are reciprocated by my manger.	1	2 3	4	5 6	7	
My relationship with my manager is composed of comparable exchanges of giving and taking.	1	2 3	4	5 6	7	
When I give effort at work, my manager will return it.	1	2 3	4	5 6	7	
Voluntary actions on my part will be returned in some way by my manger.	1	2 3	4	5 6	7	

PANAS-T

(These instructions are adapted from the original in order to measure affective presence.)

Select the answer that best describes the extent to which your supervisor makes you experience each of the feelings or emotions below on a regular basis:

Interested      Very slightly or not at all      A little      Moderately      Quite a bit      Extremely

Distressed	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Excited	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Upset	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Strong	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Guilty	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Scared	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Hostile	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Depressed	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Enthusiastic	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Proud	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Irritable	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Alert	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Ashamed	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Inspired	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Happy	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Determined	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Attentive	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Jittery	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Nervous	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Active	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely
Afraid	Very slightly or not at all	A little	Moderately	Quite a bit	Extremely



**APPENDIX B: UCF IRB APPROVAL LETTER**





University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To: **Jennifer Loglia**

Date: **August 29, 2013**

Dear Researcher:

On 8/29/2013, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: Communication in the workplace  
Investigator: Jennifer Loglia  
IRB Number: SBE-13-09574  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 08/29/2013 10:16:38 AM EDT

A handwritten signature in cursive script that reads 'Joanne Muratori'.

IRB Coordinator

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