UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

EFFECTS OF LEADER EMOTIONS ON SUBORDIANTE PERCEPTIONS AND PERFORMANCE: THE ROLE OF EMOTION TYPE, PRIOR INTERACTION, AND COMMUNICATION MEDIUM

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

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Norman, Oklahoma
2006

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EFFECTS OF LEADER EMOTIONS ON SUBORDIANTE PERCEPTIONS AND PERFORMANCE: THE ROLE OF EMOTION TYPE, PRIOR INTERACTION, AND COMMUNICATION MEDIUM

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF PSYCHOLOGY

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Acknowledgements

First and foremost I extend my thanks and gratitude to my advisor Shane Connelly for her patience and knowledge throughout my graduate training. I would not be as I am today without her guidance and care.

To my committee members Drs. Dan O'Hair, Robert Terry, Brigitte Steinholder, and Eugenia Fuenzela-Cox, thank you for being a part of my graduate training. Each of you uniquely contributed to the journey which helped to positively shape the experience.

I also would like to thank my colleagues and friends Matthew Allen, Ethan Waples, and Jason Hill for their help in data coding and analyses. Also, to my undergraduate assistants who assisted in data collection and coding. Finally to Josh Davis who was always there to provide support and encouragement.

Finally, I would like to extend my sincere gratitude to my family and friends who never allowed me to waiver when challenges arose. In particular, I would like to acknowledge two influencers, Mrs. Bernice Ruark and Dr. Warry Williams, who always reminded me that the pursuit of knowledge is what makes life worth living.

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Abstract

The current research reports findings from 2 studies assessing the relationship of emotion type, prior leader interaction, and media richness on a leader's emotions to influence subordinate perceptions and performance. Study 1 looked at emotion type (basic vs. blended) and nature of prior leader interaction (positive vs. negative vs. neutral) on perception of negative emotions and message comprehension of negative information conveyed in a leader's e-mail. Results revealed that emotion type and prior interaction interact to influence the perception of positive emotions, where a negative prior interaction followed by negative blended emotions resulted in the most accurate perceptions. Additionally, leader blended emotions increased comprehension for emotionally laden content. Study 2 looked at the effects of emotion type and media richness (rich/video vs. lean/e-mail) on perception of positive and negative emotions, comprehension of positive and negative information, and performance on a creative task. Results showed that emotion type influenced emotion perception, where basic emotions resulted in better accuracy for negative emotions while blended emotions resulted in better accuracy for positive emotions. Also, media richness did not impact perception of positive emotions but did for negative emotions with richer communication channel resulting in better accuracy. For message comprehension, emotion type and media interact to impact understanding for negative content, where highest comprehension was seen when message included blended negative emotions and delivered through a leaner medium (e.g., e-mail). Finally, hierarchical regressions provided initial evidence that emotion type, specifically blended emotions, positively contributes to performance quality. Implications for theory and practice are explored.

Effects of leader emotions on subordinate perceptions and performance: The role of emotion type, prior interaction, and communication medium

Effective leadership is defined by many variables, none perhaps more important than interactions and relationships with subordinates. Some leadership theorists posit that outstanding leaders are those who effectively use emotions when interacting with followers (Ashkanasy & Tse, 2000; Bass, 1999; Humphrey, 2002; Kellett, Humphrey, & Sleeth, 2002). Previous research has shown leader's use of emotions to impact subordinate's attitudinal and behavioral responses. Koene, Volelaar, and Soeters (2002) and Dvir, Kass, and Shamir (2004) found supporting evidence that shows leaders are able to enhance subordinate's job satisfaction and perceived organizational climate through the use of emotionally charged messages. In a related vein, Lee and Allen (2002) found leader's use of positive emotions to facilitate subordinate's engagement in organizational citizenship behaviors. More recently, Gaddis, Connelly, and Mumford (2004) looked at the role of leader affect when delivering failure feedback to subordinates, finding that negative affective displays resulted in subordinates perceiving their leader more unfavorably and performing poorly on a group task. These studies are just some examples of an increasing body of evidence that leader emotions impact subordinate perceptions, attitudes, behavior, and job performance.

A decade ago, leaders often communicated and exchanged information with subordinates through face to face contact. However, the advent of sophisticated and readily accessible technology-based communications (i.e., e-mail) has led to a decrease in face to face meetings (Avolio, Kahai, & Dodge, 2001; Marginson, King, & Mcaulay, 2000; Tan, Wei, Watson, & Walczuch, 1998). Leaders have become more accepting of

and subsequently more reliant on technology to handle the majority of correspondences with subordinates. As a result, employees process a great deal of information from leader e-mails and rely heavily on this mode of communication for gathering and interpreting organizationally relevant information (Dawley & Anthony, 2003; Schlosser, 2002). This raises an interesting question of whether leader emotions are perceived differently when conveyed via e-mail versus during face to face contact.

Thus, the present experiments seek to address a number of key issues. The first goal is to examine the accuracy with which different kinds of leader emotions are perceived in e-mail messages. A second goal is to examine whether different kinds of emotions have an impact on the accuracy of interpreting message content. Third, comparisons are drawn between a leader's e-mail communication and verbal communication via video-tape in terms of accuracy of perceiving emotions and accuracy of message content. Finally, the impact of different leader emotions conveyed through these two types of media on subordinate performance is examined, when controlling for accuracy of emotion perception and message comprehension.

Leadership and Emotions

Recent leadership research has demonstrated various effects of leader emotions on organizational behavior. A number of leadership theories imply that the use of positive emotions coincides with effective leadership (Bass, 1999; Bass & Avolio, 1993; Newcombe & Ashkanasy, 2002). Research suggests that leaders who use positive emotions when interacting with subordinates elicit more positive attitudinal and behavioral outcomes. Dvir, Kass, and Shamir (2004) looked at the impact of a leader's emotional vision on followers' commitment to the organization. Drawing from a sample

consisting of employees working in high technological organizations, the authors found the emotional content of the leader's vision statement was directly related to the type of commitment the employee possessed towards the organization. That is, those employees exposed to the emotionally charged vision statements reported significantly higher levels of affective commitment (identification and emotional involvement) to the organization versus normative commitment (obligation to perform for organization). In contrast, employees not exposed to emotion laden vision statements reported higher levels of continuous commitment (stays with organization because cost to leave is too great) to the organization. These findings suggest emotions embedded in the leader's vision statement resulted in employees feeling more affectively connected to and identify more strongly with the organization.

Koene, Vogelaar, and Soeters (2002) also found positive outcomes associated with the leader emotions. In their study, the authors investigated the effects three leadership behaviors (charisma, consideration for others, and initiating structure) had on store performance and organizational climate. Koene et al. (2002) used both economic indicators and questionnaires to collect the data from 50 super markets. Similar to Dvir et al's (2004) findings, charismatic leaders, who tended to use emotions in their appeals to followers, positively influenced employee perceptions of the organization. The authors found that stores with charismatic leaders resulted in more positive perceptions of organizational climate by fostering an environment conducive for organizational efficiency and open communication. In addition, the charismatic leadership was also positively associated with store performance, beyond other leadership behaviors of interest (e.g., the leader's effectiveness to deliver a clear, shared, and appropriate vision).

These studies suggest that the incorporation of emotions into leader behaviors can facilitate positive follower attitudinal and performance outcomes.

Leaders may also explicitly manage emotions to elicit desired follower behaviors. Pirola-Merlo, Härtel, Mann, and Hirst (2002) investigated the leader's role when work teams encounter obstacles, finding leader's indirectly facilitated group performance by suppressing the negative effects of obstacles on team climate and affect. McColl-Kennedy and Anderson (2002) looked at a transformational leader's use of emotions frustration and optimism on the effects it had on subordinate leader perceptions and performance. Results indicated leader's use of transformational leaders had direct effects on subordinates experience of optimism or frustration, and that the emotion experienced indirectly impacted subordinate performance (e.g., leader increased subordinate optimism would led to increased sales. Kellet, Humphrey, and Sleeth (2002) looked at how leader emotions and cognitive abilities influence subordinate perceptions of leader effectiveness. Their model found leader empathy to contribute the greatest to subordinate perceptions of the leader, with a path coefficient twice that of leader cognitive ability. Taken together, these studies suggest leader's use of emotion can directly and indirectly influence outcomes at the individual, team, and organizational level.

Recent studies have explored the impact leaders have on subordinate attitudes and performance when displaying different kinds of emotions. Ruark and Connelly (2003) compared two common leadership styles, transformational and transactional, on their effectiveness to use emotion when interacting with subordinates. The authors created four emotion conditions based on emotion valence (i.e., positive vs. negative) and nature of response (i.e., active vs. passive), or whether the emotion will induce engagement or

withdraw behaviors. Following exposure to leader emotion display, subordinates evaluated leader's transformational properties using the MLQ-5X and completed a creative marketing task for a fictitious organization. Results showed leader display of positive emotion regardless of leadership style increased ratings of leader effectiveness while negative emotion displays significantly hurt effectiveness scores for transactional but not transformational leaders. However, performance was influenced by emotion valence and nature such that transformational leaders displaying negative, passive emotions (e.g., anxiety) had the highest performing subordinates. In contrast, transformational leaders displaying positive, passive emotions (e.g., happiness) yielded the lowest performance scores.

Gaddis, Connelly, & Mumford (2004) looked at the impact of leader affective displays on subordinate reactions to failure feedback. Affect of leaders was manipulated either to appear positive, characterized by happy, optimistic statements and non-verbal behaviors (e.g., smiles, head nods) or negative through statements characterized by anger and disgust and non-verbal behaviors such as crossed arms and head shakes. Participants completing group tasks were given failure feedback by a confederate leader who displayed either positive or negative affect. Following feedback, the leader instructed the group to complete another generative task and then evaluated their leader's effectiveness. Results looking at leader effectiveness were similar to Ruark and Connelly (2003) in that leader effectiveness ratings were significantly higher for leaders displaying positive versus negative emotions. In addition, Gaddis et al. found performance remained constant for groups that received feedback from positive affect leaders, but that performance significantly decreased following feedback delivered by a negative affect leader.

Interestingly, the findings on leader emotion and performance parallel with Ruark and Connelly's (2003) findings that transformational leader displays of negative, active emotions (e.g., anger, disgust) was detrimental to task performance.

The research investigating the impact of leader emotions assumes subordinates are all seeing the same emotions conveyed by their leader. However, two facets of this research call this assumption into question. First, with a few exceptions, these studies have tended to focus on general negative or positive affect, rather than specific emotions. Additionally, emotion manipulations have typically been conducted using visual forms of communication, where verbal and non-verbal cues are available. Both of these factors may increase the probability that subordinates' perceptions of the leader's emotions will be more similar than different. However, sometimes leader communication is not face-to-face, so subordinates do not have as many cues to interpret the emotion. Also, leaders are capable of conveying a range of specific emotions that convey unique emotional information beyond just positive and negative affect. This point is important because there have been several studies in the broader literature on emotion showing differential effects of specific leader emotions (e.g., Dasborough, 2006; Lee & Allen, 2002; Lerner & Keltner, 2000, 2001; Lewis, 2000; McColl-Kennedy & Anderson, 2002). There are a variety of areas of research on emotion perception useful for increasing our understanding of factors that might influence the accuracy with which leader emotions are perceived.

Emotion Perception

A variety of researchers have suggested that there are several basic or universal emotions that people can readily perceive when looking at facial expressions and body

language. Cross-cultural research examining the universal nature of emotional cues evidenced high agreement for emotional displays (Ekman, 1984, 1997, 2003; Frijda, Markam, Sato, & Wiers, 1995; Mathews & Klug, 1993; Matthews & Macleod, 1994; Scherer, 1997). For example, Ekman, Friesen, et al. (1987) exposed individuals representing 10 different cultures including non-western to a number of faces displaying a particular emotion or set of emotions. The emotions identified for the study included happiness, surprise, sadness, fear, disgust, and anger. For each face, the individual indicated whether each emotion was present or absent, and judged the strength of present emotions using an 8-point descriptive scale. Results yielded strong agreement across all represented cultures for identification of most intense emotion displayed. Furthermore, high agreement was seen for second most intense emotion. The current findings provided initial empirical support for the universal nature of broader, basic emotions, and led to additional studies providing additional evidence for the salience of these emotions.

Recently, researchers have begun to look at body language as non-verbal cues influencing how people perceive basic emotions. Dittrich, Troscianko, Lea, and Morgan (1996) had individuals judge a person's emotional state from motion information alone. Participants were shown video clips of trained dancers exhibiting basic emotions (e.g., fear) and instructed to identify emotion associated with particular movements. Results showed full-body clips to elicit highest recognition of 88%, significantly exceeding probability of chance alone. More recently, Atkinson, Dittrich, Gemmell, and Young (2004) compared static vs. motion body-movement on recognition of basic emotions. Ten actors were filmed displaying each of the basic emotions, and then were shown participants either as film or still pictures where participants were asked to classify the

emotions exhibited. Results mimicked previous findings in that video resulted in significantly high recognition rates, but also that still images were significantly above chance. Together, these studies suggest basic emotions can be identified and differentiated using both facial and body movements.

However, some researchers argue that emotions are more differentiated than basic core emotions proposed by Ekman and colleagues (Fischer, Shaver, & Carnochan, 1990; Lerner & Keltner, 2000; Roseman, Spindel, & Jose, 1990). Emotions such as frustration or optimism reflect a blend of two or more basic emotions that results in a unique affective experience. Because they share characteristics from different emotions, blended emotions may be more difficult to detect in everyday exchanges (Fisher, 1990; Shaver, Schwartz, Kirson, & O'Connor, 1987). However, research on blended emotions is limited. There is limited empirical research testing perceptions of blended emotions.

One question arising out of this research is the accuracy with which core versus blended emotions are perceived. To our knowledge, no known published research has addressed this question. Because the core emotions have been robust across gender, culture, and age, these emotions may be perceived more accurately than blended emotions.

Another area of research relevant to emotion perception looks at how channel of communication influences perception of emotional information. A small set of studies has investigated channel influence by measuring neurophysiological responses. These studies have typically focused on three channels: facial or the use of facial manipulations (e.g., widening of eyes to indicate surprise), prosodic or the use of vocal manipulations (e.g., hard pronunciation to indicate anger), and lexical or use of text (e.g., sentence

describing feelings). Largest percentage of research has focused on emotion perception via facial expressions. The most well known studies are those conducted by Ekman and colleagues (see Ekman, 1992) who have worked to confirm the presence of universal features that transcend cultures. Research focusing on prosodic channels has repeatedly shown individuals rely on the pitch changes to detect and recognize emotions in speech (Frick, 1985; Murray & Arnott, 1993; Protopapas & Lieberman, 1997). Research on lexical channels typically involve comparisons between right-hemispheric damaged patients suffering from word deafness (inability to understand spoken language) and healthy participants, with findings supporting the role of oral emotion information in accurately identifying emotion orientation for more ambiguous faces and events (Greve, Henley, Joffe, & Biachnini, 2004).

This literature suggests that when leaders communicate the same emotions through different channels subordinates may perceive them differently. Given the increasing use of electronic media in leader follower exchanges, it may be important to look at how leader emotions are perceived when communicated via e-mail.

A third area of research that may be useful for increasing understanding of the accuracy with which leader emotions are perceived is emotional intelligence. Emotional intelligence has been defined as the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action (Mayer & Salovey, 1997). Predominant theories of emotional intelligence emphasize the importance of perceiving or reading the emotions of others (Bar-On & Parker, 2000; Jordan & Ashkanasy, 2006; Mayer, Salovey, & Caruso, 1999). Empirical research on emotion perception has shown that people higher on the emotion

perception scale of the MSCEIT EI measure were also more accurate in their interpretations of affective experiences people had during a negotiation exercise (Lopes, Salovey, Nezlek, & Straus, 2003). Similarly, Rice (1999) conducted a study in the financial services division of a large insurance company comprised of 164 staff members in 26 separate teams. Teams that scored higher on the EI measure MSCEIT also received the higher performance rankings from managers, with the largest impact seen in the customer service sector. In addition, team leaders scoring higher on perceiving, understanding, and managing emotions received higher performance ratings from department managers. These studies demonstrate that accurate perception of emotions is related to important organizational outcomes, such as perceiving negotiating environments, team effectiveness, and leadership performance.

Finally, research looking at individual difference traits such as neuroticism, trait affect, and need for cognition may provide additional insight on emotion perception. Neuroticism and trait affect bias perception towards congruent emotion information, while need for cognition affects attention and gathering of information used in cognitive processes. The personality dimension neuroticism refers to an individual's propensity to regularly experience negative feelings including sadness, anxiety, and nervous tension, which facilitates negative judgment formation (Benet-Martinez & John, 1998; Costa, Somerfield, & McCrae, 1996). Matthews, Pitcaithly, and Mann (1995) found that individuals high in neuroticism processed negative emotion stimuli more quickly. Further, high neurotics were also more likely to interpret neutral or ambiguous information as negative. Another relatively stable personality characteristic related to this is trait affect, which indicates the dispositional tendency to experience positive or

negative affective states over time (Barrett & Russell, 1998; Russell & Carroll, 1999; Watson, 2000). Trait affect has been shown to impact detection of changes in facial expression (Braveman, 2005), modulate reactions to positive and negative stimuli (Brief, 1995), and direct attention towards particular emotional information (Necowitz & Roznowki, 1994).

Need for cognition may also influence emotion perception. This trait refers to one's desire to engage in cognitive activities and the enjoyment one gets from such activities (Cacioppo, Petty, Feinstein, & Jarvis, 1996). Individuals with high need for cognition are more likely to seek out, acquire, and process information prior to judgment formation. Information gathered and processed includes emotional information. For example, Geers and Lassiter (2003) exposed individuals to two film clips with either congruent emotions or contrasting emotions, asking about affective reactions following the second clip. The authors found reactions to congruent video clips to be similar regardless of one's need for cognition. However, individuals with high need for cognition reported more negative reactions to non-congruent film clips, which authors contributed to detection of discrepancy facilitated by increased information searching. Kuvaas & Kaufmann (2004) found similar effects of need for cognition on a memory task following exposure to non-congruent emotion stimuli. Performance of individuals low in need suffered when presented with non-congruent emotion information, while the performance of high need individuals was relatively equal to that of people in the congruent conditions. These authors suggest high need for cognition motivates people to seek out all available information, even in adverse conditions. The findings suggest multiple

personality traits have the ability to influence an individual's attention and cognitive process, impacting judgment formation and performance.

The influence of emotional stimuli on cognitive activities is another useful line of research in understanding how individuals perceive emotions. The underlining idea is that exposure to a particular affective object activates congruent cognitive networks, increasing the individual's sensitivity to similar stimuli and thus increasing probability of engaging in future behavior or judgment formation aligned with original the emotional stimulus (Bower, 1991; Forgas & Bower, 2001; Forgas & George, 2001). The influence process typically occurs at the unconscious level, suggesting the merest exposure to emotional information can potentially shape future attitudes and behaviors. For example, Moors, De Houwer, and Eelen (2004) showed prior exposure to emotional information interacted with the individual's reaction times and number of committed errors, such that congruent conditions (i.e., positive primed emotion and positive condition) resulted in quicker reaction times and less errors committed than non-congruent conditions. Nygren, Isen, Taylor, and Dulin (1996) likewise found exposure to emotions to influence a person's perception of risk where exposure to positive stimulus led to large over estimations of winning in a game of chance.

Individuals can influence others' attitudes and behaviors through affective exchanges. Emotions are thought to be contagious in that people unconsciously adjust their own affective state to match that of the carrier (Hatfield, Cacioppo, & Rapson, 1994). Research has documented this phenomenon across organization contexts including customer service centers and work teams (Barsade, 2002; Pugh, 2001), and more recent focus on leader emotions influence on subordinate (Bono & Illies, 2006; Cherulnik,

Donley, Weiwel, & Miller, 2001; Sy, Cote, & Saavedra, 2005). Anderson, Keltner, and John (2003) found influence to be strongest when exposure originated from a more powerful individual, in this case a leader to a subordinate. These studies suggest subordinates unconsciously adjust affective state to mimic their leader, which is thought to motivate the individual towards information and tasks similar in emotional properties.

The Present Study

The present study investigates the influence of leader emotion communicated through e-mail on individual's perception of emotions and comprehension of message. First, research on the universal nature of emotions suggest a small set of basic emotions are more readily perceived due to salient properties, more so than blended emotions characterized subtle and distinct nuisances. We expected salient properties to carry over to other communication mediums including e-mail. Further, we expected blended emotions communicated via e-mail to be more difficult to perceive due to a more limited number of cues than can be transmitted through this channel (e.g., lexical and non-verbal behavioral cues are absent).

H_1: Basic negative emotions conveyed by a leader in an e-mail message will be more accurately identified than blended negative emotions conveyed by a leader in an e-mail message.

Additionally, we expected the presence of basic negative emotions in a leader's e-mail would be salient enough to prompt people to look for other negative emotions not explicitly present in the communication. The increased expectancy for additional negative affective information will likely to result in more negative emotions identified even if the emotion is not actually present. Furthermore, the presence of basic negative

emotions in leader's message will suppress individual's perception of positive emotions. However, we expect suppression to occur only when a leader uses basic negative emotions which are thought to be more salient then blended negative emotions.

H_2: Basic negative emotions in a leader's e-mail message will result in the perception of more negative emotions (those included and not included in the message) compared to negative emotions perceived when a leader's e-mail contains blended negative emotions.

H_3: Basic negative emotions in a leader's e-mail message will result in the perception of fewer positive emotions compared to positive emotions perceived when a leader's e-mail contains blended negative emotions.

Research looking at the influence of exposure to emotional stimuli on cognitive activities indicated an unconscious preference for congruent information and materials. Following this line of reasoning, we expect exposure to positive or negative leader emotions prior to the leader's e-mail message will cause subordinates to look for emotionally congruent information.

H_4: When exposed to negative leader affect prior to the e-mail communication, more negative emotions will be perceived in the leader e-mail than when prior exposure to leader affect was positive.

H_5: When exposed to positive leader affect prior to the e-mail communication, more positive emotions will be perceived in the leader e-mail than when prior exposure to leader affect was negative.

We are also interested in seeing how emotion type and prior leader exposure will impact comprehension of the content of the leader's e-mail message. However current literature

on emotion perception does not provide much theoretical or empirical guidance to justify specific hypotheses, leading us to propose two exploratory research questions:

R_1: Does emotion type conveyed in a leader's e-mail impact how accurately the content of that e-mail is comprehended?

R_2: Does prior exposure to leader affect impact how accurately the content of a leader's subsequent e-mail is comprehended?

Method

The purpose of Study 1 is to examine the impact of emotion type and nature of prior leader-subordinate interaction on the perception of emotion in an e-mail message from the leader and how accurately the content of the message is processed. A 2 x 3 between subject design is used with conditions of emotion type (basic vs. blended) and nature of prior interaction (positive vs. negative vs. neutral/control).

Participants

One hundred and eighteen undergraduates (62 female and 55 male) enrolled in psychology courses participated in this study for partial fulfillment of a course requirement. Ages ranged from 17 to 43 (M = 19.79, SD = 3.12) and a variety of academic majors were represented in the sample.

Procedures

All procedures and questionnaires were completed in one experimental session over the course of 1 hour and 30 minutes. The general flow of the session was first exposure to manipulations followed by dependent variables, and finally completion of covariate measures. To start, the experimenter read some general information about a fictitious organization that the participant just joined. The participant followed along on a

written copy that described current changes in the organization and key organization members with whom the participants work. The participant's "role" was also described (see Figure 1). Next, participants were exposed to the prior interaction manipulation and instructed to respond to two questions: how did one feel following the event and how did one feel towards their leader following the event. Once completed, the experimenter had participants focus on the e-mail, emphasizing this is a message from the leader and should therefore attend to the information. Once finished, the experimenter had all participants place the e-mail in the envelope with specific instructions not retrieve it at any future point. Following this, participants completed the emotion identification worksheet indicating all emotions they thought were present in the e-mail and the message comprehension task, where they were asked to recreate the message as close to original leader message as possible. Finally, participants complete all covariate measures. Upon completion, all material was placed into the original enveloped, returned to experimenter, and participants were debriefed.

Manipulations

Prior leader interaction. The purpose of this manipulation was to expose participants to the leader's affective state prior to the e-mail communication. Three scenarios (positive, negative, & neutral) were constructed that described a recent experience the employee (i.e., participant) had interacted with their leader. Scenarios can be found in the appendix. In general, the scenario involved the department's employees attending the weekly meeting and the director acting in a specific manner to induce one of three possible perceptions within the participant. In the negative condition, the leader was depicted as angry and overall in a bad mood through inclusion of destructive action

descriptors (e.g., meltdown), relaying of negative organization outcomes, and name calling. In the positive condition, the leader was depicted as pleasant and upbeat through the inclusion of positive non-verbal behaviors (e.g., smiling) and relaying of positive organization outcomes. In the neutral condition, the leader was depicted more as a manager who brought structure to the meeting and did not include valence-laden terms. It is important to note that both positive and negative behaviors were not directed towards the employees attending the meeting (e.g., the participant) but towards a different department within the same company. The purpose of this was to reduce the possibility of inducing a perception of threat in participants which would have been a very different sort of prior exposure rather than a general negative prime.

Basic vs. blended emotions. Four negative emotions (two basic and two blended) were selected for the current manipulation based on previous research on basic and discrete emotions (Ekman, 1992, 1999; Mignonac & Heerback, 2004; Shaver et al., 1987). Selected emotions were linked to organization topics based on previous empirical findings stemming from research on affective events in the workplace (Basch & Fisher, 2001; Brief & Weiss, 2002; Weiss & Cropanzano, 1996).

Two leader message templates were created and changed to reflect the different emotion conditions. The message consisted of two paragraphs discussing the negative impact of current organizational events on departmental functions. The first topic centered on the Board's assignment for the director to compile a report detailing the department size, functions, and contributions. However, the director feels the request is unreasonable because the information was submitted in a report six months prior and resources should focus on handling the exceptionally large workload. The second topic

addresses the issue of possible employee relocation or firing due to overlapping departmental functions with merging company. The director communicates failed attempts to persuade the board not to disrupt current departmental roster.

For each message, two negative basic emotions anger and anxiety were identified in the literature as basic emotions and also as work-related/experienced emotions, and were integrated into the leader's message. Anger was integrated into the first topic through descriptions of how the task would interfere with every day operations (e.g., comes at busiest time), the uselessness of the task (e.g., totally unnecessary), and skepticism aimed at the department's future contributions to the company (e.g., we won't be able to hold our own). The second topic communicated anxiety by emphasizing a likely negative but uncertain consequence (e.g., I'm afraid we are likely).

The negative blended emotions disappointment and frustration were identified in the literature as being subtle, discrete emotions and work-related. The emotion frustration was integrated into the board request topic through emphasizing the repetitive nature of task at a busy time (e.g., same information already exists) and unresponsiveness of the board (e.g., no one is getting back to me). The emotion disappointment was communicated by contrasting hope with likely negative consequences (e.g., I had hoped but) and leader's failure to prevent negative outcome (e.g., something I was hoping wouldn't happen). Both emotion type manipulations can be found in the appendix.

Dependent Variables

Emotion identification checklist. The checklist consisted of 40 basic and blended emotions, including the four emotions used in the emotion manipulation. The emotions were from existing emotion literature and taxonomies with equal representation of

valence (Ekman, 1992; Connelly, Gaddis, & Helton-Fauth, 2002; Fischer, Shaver, & Carnochan, 1990; Roseman, Spindel, & Jose, 1990). Emotions were presented in a random order within the checklist. The checklist can be found in the appendix.

Three perception indexes were computed to assess what emotions participants were seeing in the leader's e-mail message. First, each emotion checked represented a perceived emotion and was coded as "1" in the database. All other emotions not checked represented non-perceived emotions and was coded "0" in the database. The first index reflected a mean composite for perceived manipulated emotions and was computed by averaging the number of emotions manipulated for a particular condition that a participant checked. This index represented participants' ability to accurately perceive the negative emotions manipulated in the leader's e-mail message and was used to evaluate hypothesis 1. For example, the basic emotion condition embedded anger and anxiety into the text, so a participant could get a score of 1.0 (if both were checked), 0.5 (if only 1 was checked), or 0.0 (if neither was checked). The same procedure was used for the blended emotion condition but used frustration and disappointment in place of anger and anxiety.

The second and third perception indices reflected the mean of all negative emotions (manipulated and not manipulated) and all positive emotions that a participant indicated as present. These indices can be viewed as an "inaccuracy" in perceived emotions because each includes emotions not explicitly included in the leader's e-mail message. The overall negative emotion index averaged all check negative emotions, including those manipulated in the leader's e-mail message. The overall positive emotion index averaged all checked positive emotions.

Message comprehension task. After the emotion identification task, participants were asked to replicate the leader's e-mail message as they remembered it. Participants used lined paper to write the message with no constraints on length or time. The task can be found in the appendix.

Two benchmark scales were constructed to evaluate the participant's overall comprehensiveness. The two scales were extracted from the leader's message: 1) board's request for additional information, and 2) departmental shake up. Each scale was constructed using a 5-point likert scale (1 = little to no mention of event; 5 = complete description of event) accompanied by benchmark examples for scale points 1, 3, and 5. Two research assistants selected examples from actual write ups they thought accurately reflected differences in detail. A third assistant reviewed the scales and examples, and completed a small sample of tasks. This process was repeated until assistants reached consensus on scale points and examples.

Three research assistants independently rated a total of 118 write ups. To ensure adequate reliability, the raters underwent training that focused on understanding the definition of each scale point, applying the general rules when evaluating a replication, and avoiding common rating mistakes (e.g., halo effect). Following this discussion, raters applied the scales to 20 write ups, after which inter-rater reliabilities were computed on each scale. Results yielded high Intraclass correlations (ICC), ranging from .84 to .96, suggesting raters possessed proficient shared understanding in applying the scales.

Covariates

Emotional competence. The Work Profile Questionnaire – EI (WPQei; Cameron, 1999) is an 84 item tool developed to assess employee emotional abilities and

competencies in an organizational context. Items reflect key concepts identified by emotion researchers including Bars-On and Mayer, Salovey, and Mayer. Participants use a 5-point likert scale (1 = never/almost never; 5 = always/almost always) to indicate typical behavioral response for each item. Sample items include "I have failed to spot when others appeared negative" and "I have sensed how other people felt". Coefficient alpha was calculated and the internal consistency calculated using Cronbach's alpha of this scale was .93.

Trait affect. The PANAS (Watson, Clark, & Tellegen, 1988) is a commercial tool commonly used in emotion research to assess trait affect. The questionnaire consists of 20 affective words, 10 positive (e.g., proud) and 10 negative (e.g., ashamed), which assess individual level of positive affectivity (PA) and negative affectivity (NA). For each item, participants use a 5-point likert scale (1 = strongly disagree; 5 = strongly agree) to rate the degree to which one has experienced the specific emotion in the last month. The two dimensions showed high internal consistency, with alphas of .87 for PA and .86 for NA.

Neuroticism. Benet-Martinez and John's (1998) Big Five Inventory assessed participant neuroticism. The subscale consisted of eight items and required participants to rate items using a 5-point likert scale (1 = strongly disagree; 5 = strongly agree). Sample items included "I see myself as someone who can be tense" and "I see myself as someone who is not easily upset". Internal consistency for the scale was .71.

Need for cognition. Participants completed Cacioppo & Petty's (1982) need for cognition questionnaire. The inventory consists of 18 general statements in which participants use a 6-point likert scale (1 = strongly disagree; 6 = strongly agree) to

evaluate one's agreeableness to an item. Sample items include "I prefer complex to simple problems" and "Learning new ways to think doesn't excite me very much". The questionnaire demonstrated high internal consistency, yielding a .91 alpha in the present study.

Demographics. Participant demographic information was collected in an effort to rule out basic influencers on emotion perception. Past research suggests gender differences may exist for detecting emotions (Guinther, Segal, & Bogaards, 2003; Zald, 2003). Furthermore, participant age which may be related to emotion maturity and major may be related to perception and behavioral reactions. In addition, information regarding one's use of e-mail including frequency and preferences was collected to rule out possible biases towards this form of communication (vs. video). Additional information collected included ACT/SAT score, business courses enrolled/completed, and past sales employment.

Manipulation Checks

Prior interaction. The purpose of this check was to evaluate the effectiveness of the description (e.g., negative prior should evidence highest inclusion of negative affective terms). Participants responded to two questions after reading the description: 1) how do you feel following this meeting, and 2) how do you feel towards your leader following this meeting. Three research assistants rated each response for the degree of positive affect and negative affect present using a 5-point likert behaviorally anchored rating scale (1 = absence of positive/negative affect; 5 = response is overflowing with positive/negative affect). Examples for points 1, 3, and 5 were drawn from actual responses. Raters received training on scale definitions, general application rules, and

avoiding common rating errors. Following training, raters independently evaluated 20 responses. Intraclass correlation coefficients (Shrout & Fleiss, 1979) demonstrated good understanding of rating scales with ICC scores ranging from .77 to .84, with final ICC scores ranging from .92 to .98 across of the different responses.

Emotion type. The purpose of this check was to evaluate whether participants were seeing manipulated emotions more than all other possible emotions. The check used a t-test to assess mean differences between perceptions of manipulated emotions (e.g., basic emotions anger and anxiety) versus all other possible emotions (e.g., guilt, boredom, bliss, sympathy, etc.).

Analyses

Analysis of the data began with assessing whether the covariates had any significant effects on the dependent variables using a series of ANOVAs. Results did not return any significant relationships. Therefore, covariates will not be discussed in reference to hypotheses are research questions. Next, manipulation checks were performed to assess the effectiveness of the prior leader interaction and emotion type. The prior interaction check used two ANOVAs to assess response differences across conditions (positive, neutral, and negative). The emotion type check used a t-test to assess mean differences between perceptions of manipulated emotions (e.g., basic emotions anger and anxiety) versus all other possible emotions (e.g., guilt, boredom, bliss, sympathy, etc.).

Univariate procedures tested hypotheses for emotion perception and message comprehension. ANOVAs were run to test the emotion perception hypotheses 1 through 5. These analyses compared means across conditions on perception indices reflecting

accuracy and inaccuracy. ANOVAs for message comprehension (research questions 1 and 2) compared means across conditions on ratings for the two major components or topics discussed in the leader's message (board's request and departmental shake up).

Results

Descriptive statistics and zero order correlations among the dependent variables and covariates are presented in Table 1. A strong correlation emerged between perceived negative emotions that were manipulated and negative emotions that were not manipulated, suggesting that when participants identified the manipulated negative emotions they also tended see other negative emotions that were not manipulated. Additionally, when they identified the manipulated negative emotions, participants tended to perceive fewer positive emotions. Comprehension scores for the two content areas were only correlated at .30, suggesting that message scores should be analyzed separately.

Manipulation Checks

The effectiveness of negative vs. positive vs. neutral prior leader interaction manipulation was assessed in a series of ANOVAs. The first analysis inspected the leader affect mean. Results showed significant differences in participants use of positive affect (F (2, 115) = 19.46, $p > .001$) and negative affect (F (2, 115) = 66.89, $p > .001$) to describe the leader following the interaction. Follow up Tukey t-tests confirmed that the positive (M = 2.33; SD = .98) and neutral conditions (M = 2.72; SD = .83) used more positive affect to describe the leader than either the negative groups (M = 1.46; SD = .92). Post hoc Tukey t-tests also showed that participants in the negative condition (M = 2.80; SD = .84) rated the leader higher in negative affect than those in the positive (M = 1.87;

SD = .72) or neutral (*M* = 1.09; *SD* = .25) conditions. The second analysis looked at self-report of positive and negative emotions following the leader interaction. Results showed significant differences for reports of positive emotions (F (2, 115) = 21.20, $p > .001$) and negative emotions (F (2, 115) = 68.90, $p > .001$) with means generally in the expected direction. Tukey t-tests on reported positive emotion should significantly higher reports following the positive (*M* = 2.29 *SD* = 1.27) and neutral (*M* = 2.45; *SD* =.59) conditions compared to the negative condition (*M* = 1.23; *SD* = .67). Additional post hoc on self reports of negative emotion were significantly higher following negative interaction (*M* = 2.92; *SD* = .84) compared to positive (*M* = 2.02; *SD* = .84) and neutral (*M* = 1.06; *SD* = 1.03) interactions. It appears the manipulations effectively portrayed the leader either as positive or negative. However, the neutral description elicited greater use of positive affect in responses than the positive description, although the differences were not significant.

Two separate t-tests evaluated the effectiveness of the emotion manipulation. For the basic emotion condition, the t-test compared perception scores for manipulated and non-manipulated emotions. Results yielded significantly higher mean perception scores for manipulated (*M* = .48; *SD* = .16) vs. non-manipulated (*M* = .23; *SD* = .11) emotions, $t(59) = 5.92$, $p < .01$, suggesting the basic emotion manipulation worked as intended. A separate t-test looked at compared perception mean scores in the blended emotion condition. Inspection of means revealed significantly higher scores for manipulated (*M* = .50; *SD* = .16) vs. non-manipulated (*M* = .18; *SD* = .10) emotions, $t(58) = 10.57$, $p < .01$, suggesting the effectiveness of the blend emotion manipulation.

Hypothesis Testing

Four separate fixed effects factorial analyses of variance (ANOVAs) tested whether nature of prior interaction with leader and emotion type interacted to impact emotion perception and message comprehension. Table 4 summarizes significant F-scores including significance level and effect size.

Hypotheses 1 through 3 deal with emotion perception differences when leaders use different types of emotions in e-mails. Hypothesis 1 predicted that basic negative emotions conveyed by a leader in an e-mail would be more accurately identified than blended negative emotions. Table 2 shows the means and standard deviations for accuracy and inaccuracy indices by condition. The non-significant differences between mean perception scores (Basic $M = .83$, $SD = .27$; Blended $M = .84$, $SD = .25$) did not support hypothesis 1. Hypothesis 2 predicted that the leader's use of basic negative emotions in an e-mail would result in greater perceptions of negative emotions in general than leader use of blended negative emotions in an e-mail. The mean perception scores were higher for the basic condition as expected (Basic $M = .62$, $SD = .18$; Blended $M = .57$, $SD = .17$), although the difference was not significant. Thus, hypothesis 2 is not supported.

For hypothesis 3, leader use of basic negative emotion in an e-mail message was expected to result in the perception of fewer positive emotions in general than blended emotions conveyed in an e-mail. While this hypothesis was not supported, there was a significant interaction between emotion type and prior interaction (see Figure 2). Emotion type and prior leader exposure significantly influenced perception of positive emotions, $F(1, 117) = 4.10$, $p < .05$, $\eta^2 = .07$, with fewest positive emotions perceived in the negative prior interaction and blended leader emotion condition ($M = .03$, $SD = .05$). Follow up

post hoc Tukey t-tests evidenced significantly higher perception mean for the Blended-Neutral condition compared to Basic-Positive ($t(2, 37) = -2.55$, $p < .05$), Basic-Neutral ($t(2, 37) = -2.26$, $p < .05$), and Blended-Negative ($t(2, 37) = -3.68$, $p < .001$) (see Table 2). Results suggest leader's use of blended negative emotions following a negative interaction may increase the sensitivity for negative information and threat while suppressing active searches for positive information. In contrast, when the leader's use of negative blended emotions follows a neutral interaction there may be more ambiguity in interpreting those emotions, resulting in a wider range of emotions being perceived including positive ones. Interestingly, positive prior leader exposure did not appear to instill the same search activities. The findings are interesting in light of existing literature and will be explore in later sections.

Hypotheses 4 and 5 looked at the influence that prior leader exposure had on emotion perception. In hypothesis 4, we expected exposure to negative leader affect prior to the leader's e-mail would result in the perception of more negative emotions than when prior exposure is positive. Results yielded a significant difference in negative emotion perception, $F(1, 117) = 3.48$, $p < .05$, $\eta^2 = .06$. Inspection of means showed differences were aligned with expectations (Negative $M = .65$, $SD = .15$; Positive $M = .57$, $SD = .19$), demonstrating support for the hypothesis. In hypothesis 5, we expected exposure to positive leader affect prior to leader e-mail would result in the perception of more positive emotions than when prior exposure is negative. Analyses showed a significant interaction of emotion type and prior leader exposure (F (1, 117) = 4.10, $p < .05$, $\eta^2 = .07$) as previously discussed. Thus, hypothesis 5 is not supported.

This study also investigated whether emotion type and prior leader exposure influenced comprehension of a leader's e-mail. Table 3 shows the means and standard deviations for message comprehension by condition. The first research question looked at the influence of emotion type on comprehension. Two separate ANOVAs assessed mean variance for comprehension of board's request and department shake up. Analysis for comprehension of board's request did not indicate significant differences for emotion type. However, analysis for department shake up was significant ($F(1, 117) = 6.92$, $p < .01$, $\eta^2 = .06$), with inclusion of basic emotions ($M = 2.44$, $SD = .64$) in the e-mail facilitating greater comprehension of topic compared to blended emotions ($M = 2.10$, $SD = .77$). The second research question looked at the influence of prior leader exposure on comprehension of a leader's e-mail. Prior leader exposure did not influence comprehension of either subject area. Together, these findings suggest the type of emotion a leader uses when communicating information via e-mail appears to have some influence on the comprehension of material, and prior exposure to leader affect does not impact message comprehension.

Discussion

The purpose of the present study was to investigate the influence of emotion type and prior leader exposure on emotion perception and comprehension for a message sent by a leader via e-mail. Results provide partial support for the idea that basic emotions are more accurately perceived with emotion type moderated by nature of prior leader interaction. In addition, results extend evidence that emotions facilitate cognitive activation and information processing.

Study 1 provided support for the idea that emotion type and the nature of a leader's prior affect influence emotion perception and message comprehension. Aligned with emotion research and cognitive processing (e.g., Clore, Schwarz, & Conway, 1994), we found basic emotions (e.g., anger and anxiety) to elicit greater comprehension for organizational events. Basic emotions are characterized by broader, more salient properties and therefore are more easily identified in a message. Individuals may have interpreted basic negative emotions as requiring more attention than blended negative emotions because the perceived level of threat (although not to them self directly in this case) may have been higher. More accurate comprehension may have been due to higher activation of attention and cognitive processes in response to potentially threatening information signaled by leader's use of basic negative emotions. For example, Carretie, Mercado, Tapia, & Hinojosa (2001) presented participants with positive and negative stimuli and measured attention and related resources. They found participants exerted greater attention resources to negative events, much more than when presented positive stimuli. In addition, we found prior negative exposure to a leader led to more accurate perception for negative affect in an e-mail. As previously mentioned, it is possible that this affective priming increased attentional resources directed towards finding other negative information. Interestingly, participants appear to maintain the heightened attention for some time as the leader's e-mail came approximately four minutes after the prior exposure manipulation.

Perhaps more interestingly we found prior exposure moderated the influence of emotion type on individual's perception of affective information contained in a leader's e-mail. When the leader's prior affective state was negative, this had a greater impact on

the perception of positive emotions in the blended condition, with fewer positive emotions reported than in any other condition. Blended emotions are more subtle, allowing participants more discretion in assessing the affective nature of information, and therefore relied more heavily on past leader interactions to search for congruent affective information. In contrast, the leader's use of blended negative emotions after a positive interaction did result in more positive emotions being seen but also resulted in high inaccuracy for negative emotions. One explanation is that the affective incongruence between prior leader interaction and message resulted in participants seeing additional negative emotions in the message similar to effects seen following negative leader interaction. Newcombe and Ashkanasy (2002) suggest subordinates use past leader interactions to create norms for how the leader is expected to act. The authors manipulated the affective congruency between leader displays and message and found participants rated their leader as less effective when leader affective display did not match the affect of the message. Extending these findings to the current study, the incongruent affect between prior leader interaction and message resulted in participants viewing the message as more negative. Interestingly, the neutral interaction resulted in the highest report of positive emotions. The neutral condition had the leader conduct a routine meeting that reported that the department would continue operating under normal working conditions. However, participants may have interpreted the message as meaning that all was fine with the status quo, increasing overall positive feelings. This may explain why individual in the neutral condition used more positive affective words when describing their leader and in self reports.

While the present study adds to our understanding of how different types of negative emotions and prior leader affect influence how emotions in an e-mail are perceived, as well as the accuracy with which the e-mail is interpreted, additional research is needed for several reasons. First, all emotions were conveyed in an e-mail across conditions, providing no comparison with one of the most common ways emotion is conveyed, face to face. Second, the prior study looked at only negative emotions in the context of an e-mail. However, given previous research on the asymmetry of responses to positive and negative emotions (see Dasborough, 2006; Taylor, 1991) it is likely we would see different pattern of results for positive emotions. Third, the prior study did not examine outcomes related to task performance, which would arguably be of greatest interest in an organizational setting.

Study 2: Introduction

The purpose of Study 2 is to investigate the influence of both positive and negative emotions on subordinate perceptions and performance when communicated through different channels, such as e-mail and face to face.

Communication Characteristics

Communication between individuals can be conducted via different modes, where the channel directly influences the type of cues that manifest within messages. Media richness theory (MRT) provides a meaningful framework to differentiate between communication channels on the basis of presence and strength of verbal and non-verbal cues (Sheer & Chen, 2004). How these cues manifest within the communicated message influences personal involvement-distance and degree of personal attachment-responsibility (Burgoon & Hale, 1993). MRT assesses and categorizes communication

modes on four characteristics: 1) feedback immediacy; 2) use of grammatical and language cues (e.g., tone inflection); 3) use of non-verbal cues (e.g., physical presence); and 4) personal focus (e.g., responsibility) (Daft & Lengel, 1984; Sheer & Chen, 2004). To date, researchers have identified the degree of richness for a number of commonly used communication channels, such as phone, e-mail, and face to face exchanges.

Researchers established a taxonomy of information richness using MRT characteristics in order to identify and categorize communication channels based on their degree of richness (Daft & Lengel, 1984; Mann, Varey, & Button, 2000). According to the taxonomy, personal interaction (face-to-face) is the richest mode of communication because of the immediacy of feedback, the availability of multiple language and non-verbal cues, and the ability to instill personal relevance. In contrast, e-mail (computer-to-computer) is considered a leaner mode of communication due to delayed feedback, limited grammatical cues, absence of non-verbal cues, and difficulty of instilling personal relevance (Sheer & Chen, 2004; Trevino, Lengel, Bodensteiner, Gerloff, & Muir, 1990; Zmud, Lind, & Young, 1990). Therefore, it is likely the effectiveness of communication and subsequent reactions including emotional and behavioral responses will likely vary due to the medium's degree of richness.

Similarly, social presence theory (SP) holds that different communication mediums allow participants to experience varying degrees of social presence while engaging one another, influencing the attitudinal and behavioral outcomes (Rice, Hughes, & Love, 1989; Short, Williams, & Christie, 1976; Straub, 1995). Social presence measures the degree to which a medium facilitates awareness of communicators during the exchange (Fulk, Schmitz, & Steinfield, 1990). Past research suggests social presence

has the ability to impact attitudes and behaviors, with the degree of influence being dependent upon the richness of the channel (Rogers & Lea, 2005; Short et al., 1976). Lombard and Ditton (1997) had participants view infomercials and found those who reported higher levels of social presence also indicated greater confidence in the brand. Research on distance learning has shown social presence to influence student's class involvement including participation in discussions, completing assignments, and course attendance (Gunawardena & Duphorne, 2000; Gunawardena & Zittle, 1997; Rourke, Anderson, Garrison, & Archer, 2001). Across studies, channels that allowed for more verbal and non-verbal cues to be exchanged and provided opportunity for real time interactions led to higher reports of social presence.

Social presence characteristics overlap with MRT criteria to distinguish richness. Both theories account for the ability to incorporate different cues (e.g., non-verbal behaviors) during the exchange, where larger variety is associated with richer mediums and more social presence. Another shared criterion is whether the channel allows for synchronous exchange, which is a characteristic of both richer channels and higher awareness of presence. As such, it appears that social presence appear to be positively related to the richness of the medium, such that as richness increases the communicators perceived social presence also increase (e.g., a rich medium such as face to face emit high social presence while a lean medium such as e-mail generates a low social presence impression). In view of the similarity of these theories, further discussion regarding social presence will be in terms of outcomes associated with media richness.

Media richness theory also has implications for emotions when communicated via different channels. First, the number of cues associated with the emotions (verbal and

non-verbal) communicated is constrained by the method used to send the message. In other words, the richness of the medium will directly impact the type and number of cues that emerge within a message. In turn, the constraint of cues may influence the receiver's ability to detect and subsequently react to the emotions embedded within the message. Consequently, the richness of the medium could affect the leader's ability to communicate emotions especially considering that people's ability to accurately perceive emotions varies even under ideal conditions (Mayer, Caruso, & Salovey, 1999; Mayer, Salovey, & Caruso, 2000). A leader is able to use auditory and visual cues in addition to specific language speaking face to face rather computer to computer. This suggests that subordinates will be more accurate in detecting emotion when seeing and hearing their leader rather than just reading an e-mail Coupled with emotion perception research on universal properties of emotion and channel processing , one may also expect an interaction between the richness of the medium (rich vs. lean) and type of emotion (core vs. blended), such that less rich communication methods (i.e., e-mail) would be more detrimental for identifying blended emotions versus core emotions within a leader's message.

The Present Study

The present study investigates the influence of leader emotion communicated through two common organizational channels, face to face and e-mail, on individual's perception of emotions, message comprehension, and task performance. First, research on the universal nature of emotions suggests a small set of basic emotions are more readily perceived due to their salient properties than blended emotions, which are characterized by more subtle and distinct nuances. The salient properties are expected to generalize

across different communication channels a leader may use in an organization. In contrast, blended emotions incorporate multiple, subtle characteristics that may be more difficult to read regardless of the channel of communication used.

H_1: Basic positive and negative emotions conveyed by a leader in a message will be more accurately identified than blended positive and negative emotions conveyed by a leader in a message.

Additionally, perceived emotions may increase expectations for similar emotions to also be present, leading an individual to report similar same valence emotions even when they are not present. Because basic emotions possess more universal and thus more recognizable characteristics, we expect leader's use of basic emotion to facilitate higher reports of other emotions not actually present than when using blended emotions.

H_2: Basic negative emotions conveyed by a leader in a message will result in the perception of more negative emotions than blended emotions conveyed by a leader in a message.

H_3: Basic positive emotions conveyed by a leader in a message will result in the perception of more positive emotions in general than blended emotions conveyed by a leader a message.

Research on media richness suggests the communication channel a leader utilizes in delivering a message will impact receiver's emotion perception. Media richness theory suggests richer channels allow for more cues to be transmitted during information exchange, which facilitates delivery and processing of message content. Therefore emotions communicated via richer channels such as face to face would be expressed with a larger number and variety of cues, which is likely to increase detection of affect

embedded with a particular message. In contrast, leaner forms of communication such as e-mail allows for a limited cues to be transmitted, making identification of emotion more difficult.

H_4: Leader's use of a rich channel of communication (e.g., face to face) will result in more accurate perception of manipulated emotions than use of a lean channel (e.g., e-mail).

H_5: Leader's use of a rich channel of communication (e.g., face to face) will result in less inaccuracy in perceiving positive and negative emotions that are not present than use of a lean channel (e.g., e-mail).

An individual's ability to comprehend a leader's message may also be influenced by the leader's choice of emotion and communication channel. As seen in the prior study, leader's use of basic negative emotions facilitated comprehension for content describing department activities. Because basic emotions are salient, they are likely to exert more influence on the mobilization of cognitive resources when attending to emotional information, in particular negative affective events that increase perceived levels of threat. However, it is unclear whether emotion type will impact the influence of positive emotions on what cognitive processes are activated. Typically positive emotions stimulate feelings of contentment and a need to maintain status quo. The mood maintenance theory from the general emotion literature suggests that positive emotions may increase motivation to maintain current conditions in an effort to stay in a positive mood.

H_6: Leader's use of basic emotions will facilitate greater subordinate comprehension for positive and negative organizational events described in a leader's message than leader's use of blended emotions.

Media richness is also expected to impact subordinates' comprehension for organizational events described in a leader's message. A messaged delivered face to face allows a leader to include larger number and variety of cues in communicating information which presents the receiver (e.g., the subordinate) with a more complete picture of the described event. In addition, the leader's presence creates a sense of social presence and accountability on the part of the subordinate, potentially increasing focus and cognitive processing.

H_7: Leader's use of richer channel will facilitate greater subordinate comprehension for positive and negative organizational events described in a leader's message than leader's use of leaner channel.

The study is also interested in seeing how leader's use of different emotions and communication channels impact subordinate performance on a creative task. Research looking at the influence of emotion on creative performance has mainly focused on the impact of emotional valence rather than whether an emotion is basic versus blended. Research by George and Zhou (2002) demonstrated that the effects of emotion on creative performance were stronger when emotional clarity was high. When people knew they were feeling dissatisfied, they worked longer on the task and came up with a larger of higher quality solutions. A leader's us of basic emotions may provide greater clarity than use of blended emotions. Additionally, basic negative emotions may be more

effective at raising awareness of problems with the status quo (Lord & Brown, 2001), motivating the individual to change the situation through concentrated performance.

R_1: Does type of leader emotion influence subordinate performance when accuracy of emotion perception and message interpretation are taken into account?

Additionally, richness of communication channel may impact an individual's creative performance. On one hand, increased richness of face to face communication may facilitate creative performance because a larger number and variety of cues are transmitted, allowing the receiver to form a more complete picture of current events. However, less rich channels such as e-mail allow the individual to regulate the rate at which information is communicated and thus taken in, which may allow the individual to process information more efficiently and leading to better performance.

R_2: Does richness of communication channel influence subordinate performance when accuracy of emotion perception and message interpretation are taken into account?

Method

The purpose of Study 2 was to examine presentation of emotion (core vs. blended) and richness of communication as mechanisms underlying perception and subsequent reactions to leader's emotional messages. Study 2 utilized a 2 x 2 between subject design, with conditions of presentation of emotion (core vs. blended) and richness of communication (video vs. e-mail).

Participants

One hundred and twenty undergraduates (60 female and 60 male) enrolled in psychology courses participated in this study for partial fulfillment of a course requirement. Ages ranged from 17 to 26 (M = 19.23, SD = 1.63) and a variety of academic majors were represented in the sample.

Procedures

The current study employed a similar experimental protocol as described in Study 1, with three notable differences. First, the media richness manipulation replaced the prior interaction. Second, positive emotions were added to the basic and blended emotion manipulation. Third, participants completed a creative task for the leader after the message comprehension task. All other materials, instructions, and procedures were the same as in Study 1. The experimenter randomly assigned participants to one of four conditions: rich media/basic emotions; rich media/blended emotions; lean media/basic emotions; lean media/blended emotions. After becoming familiar with the organization and their role, participants received a message from their leader. Half of the participants viewed a video of their leader delivering news on current organization events. The other half received printed e-mails sent by their leader containing the exact same text that was communicated via video. Participants then completed the emotion identification task asking them to check what emotions the leader was feeling, and the message comprehension task asking them to reiterate in writing the content of the leader's message. Finally participants performed a creative task whether generated an advertising campaign for one of the organization's clients. The session lasted approximately 1 hour 30 minutes.

Manipulations

Basic vs. blended emotions. The current study utilized the same leader messages and negative emotion manipulations from Study 1 with the addition of positive emotions and positive organizational events. Two basic positive emotions and two blended positive emotions were selected for inclusion based on previous research on basic and discrete emotions (Ekman, 1992, 1999; Mignonac & Heerback, 2004; Shaver et al., 1987). Selected emotions were linked to organization topics based on previous empirical findings stemming from research on affective events in the workplace (Basch & Fisher, 2001; Brief & Weiss, 2002; Weiss & Cropanzano, 1996).

The leader message was expanded to include two positive organizational events. The first event focused on the benefits the company will experience due to the merger with a larger, national business (e.g., availability of latest technology in designing adverts). The second component described the positive impact the merger will have on company stocks and how it will improve retirement benefits. The positive topics were combined with previous negative message resulting in a four paragraph leader message.

Two separate leader messages were constructed using the leader message template described in the preceding section. Message one integrated selected basic emotions into each of the positive organizational topics. The emotion happiness was integrated into the topic opportunity by emphasizing positive outcomes through adhering to status quo policies and procedures (e.g., strengthen our ability). The emotion surprise was matched to discussion on stocks through inclusions of two unlikely but positive scenarios: favorable approval by Wallstreet (e.g., stocks reaching an unprecedented value) and parent company investing into employee retirement plans (e.g., Amazingly, the company has agreed). The positive basic emotion topics were combined with the two

negative core emotion topics (anger at board's request and anxiety over possible job loses).

The second message used blended emotions to communicate positive events. The emotion affection was integrated into the topic opportunity by emphasizing the communal nature of the department (e.g., note merely a department, but a family) and shared feelings (e.g., performed when I needed it most and I thank you). The emotion optimism was matched to the topic stocks using future-oriented terms (e.g., speculating; could possibly) to reference desirable outcomes. The positive events were paired with negative blended events (e.g., frustration and disappointment) to form the second leader message. The two emotion type manipulations can be found in the appendix.

Media richness. The media richness conditions manipulated the communication channel a leader used to deliver an organizational message to subordinates. Two prominent communication channels, face to face and e-mail, were identified in the literature as being appropriate and frequently utilized methods to communicate in a work setting (Avolio et al., 2001; Marginson et al., 2000). Face to face (FtF) represented the richest form of communication. However, a video of the leader substituted for the FtF condition to ensure standardization across all sessions. The video required a mock leader to relay the leader message to his subordinates for both emotion conditions (e.g., basic and blended). To increase accuracy of emotional displays, a professor from the performing arts department at the university was recruited to play the role of the leader. In addition, verbal and non-verbal cues were identified from literature on performing arts, acting, and prevailing emotion studies which the leader incorporated into the video

(Ekman, 1992, 1999; Tait, 2002; Zarrilli, 1995). Two videos were filmed, one for each emotion condition, and saved in a standard media format to allow for computer playback.

The second medium, e-mail, represented the leanest communication channel. The e-mail document was constructed using a Microsoft Word© template. To increase fidelity, the e-mail included an address line (e.g., employees of advertising department, original sender (e.., director of advertising department), and subject line (e.g., departmental update: merger and restructuring). Two e-mails were constructed, one for each emotion condition. As with Study 1, for practical reasons, e-mails were presented in paper format.

Dependent Variables

Emotion identification checklist. The present study administered the same emotion checklist as in Study 1. Please refer to Study 1 method section for a complete description of questionnaire construction, content, and score computation. The checklist consisted of 40 affective terms. Participants placed a check to the left of each term believed present in the leader's message. The checklist can be found in the appendix.

Six perception indexes were computed to assess what emotions participants were seeing in the leader's e-mail message. First, each emotion checked represented a perceived emotion and was coded as "1" in the database. All other emotions not checked represented non-perceived emotions and was coded "0" in the database. The first index reflected a mean composite for perceived manipulated emotions and was computed by averaging the number of emotions manipulated for a particular condition that a participant checked. The first and second indices represented participants' ability to accurately perceive the positive and negative emotions manipulated in the leader's message and was used to evaluate hypothesis 1. For example, the basic positive emotion

condition embedded happiness and surprise into the text, so a participant could get a score of 1.0 (if both were checked), 0.5 (if only 1 was checked), or 0.0 (if neither was checked). The same procedure was used for the blended emotion condition but used affection and optimism in place of basic positive emotions. The process was repeated to compute accuracy index for basic negative emotions (anger and anxiety) and blended negative emotions (frustration and disappointment).

The third and fourth perception indices reflected the mean of all negative emotions (manipulated and not manipulated) and all positive emotions that a participant indicated as present. These indices can be viewed as an "inaccuracy" in perceived emotions because each index includes emotions used by leader as well as emotions not explicitly included in the leader's message. The overall negative emotion index averaged all check negative emotions, including those manipulated in the leader's e-mail message. The overall positive emotion index averaged all checked positive emotions.

The fifth and six perception indices reflected the mean of non-manipulated (those not explicitly embedded in the leader's message) negative emotions and non-manipulated positive emotions that a participant indicated as present. These indices reflect erroneous perception of emotion because each index includes only emotions not explicitly included in the leader's message. The negative emotion index averaged all checked non-manipulated negative emotions (excludes condition's manipulated emotions). The positive emotion index averaged all checked non-manipulated positive emotions.

Message comprehension task. Participants were instructed to replicate the leader message by writing down what they remembered the leader expressed in the message (see appendix). Raters scored comprehension for each of four topics (opportunities,

stocks, board's request, department shake up) using 5-point likert scale with behavioral markers. Principle component analysis evidenced two factors accounted for the majority of variance in message comprehension, with matrix suggesting combining same valence topics (e.g., opportunity and stocks). Therefore, two composite indices were generated, one reflecting positive message content and other reflecting negative message content.

Creative advertising task. Participants completed a performance task that incorporated elements from their departmental position (e.g., advertising agent) and current organizational activities (e.g., company merger). The task required participants to construct a new advertising campaign for an existing local client, which would focus on replacing current print-based strategy with television advertisement. The performance task handout can be found in the appendix.

Three graduate students independently evaluated participant advertising campaigns on overall quality and originality. The raters used benchmark rating scales to generate the ratings of quality and originality. The scales were developed in accordance to protocol outlined by Redmond, Mumford, and Teach's (1993) article assessing a similar performance task. First, the principle investigator met with a focus group comprised of 3 undergraduate research assistants naive to the current task. The assistants were presented with 20 tasks representing quality and 20 tasks representing originality. The principle investigator instructed assistants to rate all tasks on their degree of quality and originality using a standard 5-point graphical rating scale (1 = little to no; 5 = highly). Assistants were not given any definition for either mark, forcing them to generate their own criteria to differentiate between scale points. Upon completion of all ratings, assistants were instructed to write down the criteria used to discriminate tasks

between quality points and originality points, followed by a discussion that identified the key and most useful discriminators. Further discussion identified two key criteria useful in differentiating quality across tasks: 1) actual plan (i.e., how do we do this); and 2) strategic outlook (i.e., long term benefits). In addition, two useful criteria were identified to differentiate tasks on originality, 1) unexpectedness (i.e., unprecedented but effective presentation), and 2) description (i.e., method to invoke mental image). Next, the group sorted the 20 tasks into one of five scale point and identified one task most indicative for quality scale points 1, 3, and 5 and for originality scale points 1, 3, and 5, which were integrated into the benchmark scales. Finally, two marketing graduate students from the business school evaluated the quality and originality scales on their completeness of capturing relevant marketing criteria and usefulness in rating current tasks.

Prior to the coding, raters underwent training meant to facilitate skillful use of benchmark scales. The session was broken into two sessions. During the first session, the trainer emphasized the definitions of quality and originality as well as highlighting the key characteristics that differentiate between scale points. In addition, raters practiced applying the scales on two write ups, followed by discussion on the appropriateness of assigned ratings. Once consensus was reach, raters were assigned 8 additional advertising projects to rate. ICC scores were computed on these judgments, yielding a score of .83 for quality and .89 for originality, suggesting raters possess sufficient shared understanding and ability to utilize the benchmark scales for the present coding task.

Covariates

Emotional competence. The Work Profile Questionnaire – EI (WPQei; Cameron, 1999) is an 84 item tool developed to assess employee emotional abilities and

competencies in an organizational context. Items reflect key concepts identified by emotion researchers including Bars-On and Mayer, Salovey, and Mayer. Participants use a 5-point likert scale (1 = never/almost never; 5 = always/almost always) to indicate typical behavioral response for each item. Sample items include "I have failed to spot when others appeared negative" and "I have sensed how other people felt". Coefficient alpha was calculated and the internal consistency calculated using Cronbach's alpha of this scale was .91.

Trait affect. The PANAS (Watson, Clark, & Tellegen, 1988) is a commercial tool commonly used in emotion research to assess trait affect. The questionnaire consists of 20 affective words, 10 positive (e.g., proud) and 10 negative (e.g., ashamed), which assess individual level of positive affectivity (PA) and negative affectivity (NA). For each item, participants use a 5-point likert scale (1 = strongly disagree; 5 = strongly agree) to rate the degree to which one has experienced the specific emotion in the last month. The two dimensions showed high internal consistency, with alphas of .86 for PA and .85 for NA.

Neuroticism. Benet-Martinez and John's (1998) Big Five Inventory assessed participant neuroticism. The subscale consisted of eight items and required participants to rate items using a 5-point likert scale (1 = strongly disagree; 5 = strongly agree). Sample items included "I see myself as someone who can be tense" and "I see myself as someone who is not easily upset". Internal consistency for the scale was .77.

Need for cognition. Participants completed Cacioppo & Petty's (1982) need for cognition questionnaire. The inventory consists of 18 general statements in which participants use a 6-point likert scale (1 = strongly disagree; 6 = strongly agree) to

evaluate one's agreeable to item. Sample items include "I prefer complex to simple problems" and "Learning new ways to think doesn't excite me very much". The questionnaire demonstrated high internal consistency, yielding a .93 alpha in the present study.

Demographics. Participant demographic information was collected in an effort to rule out basic influencers on emotion perception. Past research suggests gender differences may exist for detecting emotions (Guinther, Segal, & Bogaards, 2003; Zald, 2003). Furthermore, participant age which may be related to emotion maturity and major may be related to perception and behavioral reactions. In addition, information regarding one's use of e-mail including frequency and preferences was collected to rule out possible biases towards this form of communication (vs. video). Additional information collected will include ACT/SAT score, business courses enrolled/completed, and past sales employment.

Manipulation Check

Emotion type. The purpose of this check was to evaluate whether participants were seeing manipulated emotions more than all other possible emotions. The check used a t-test to assess mean differences between perceptions of manipulated emotions (e.g., basic emotions anger and anxiety) versus all other possible emotions (e.g., guilt, boredom, bliss, sympathy, etc.).

Analyses

A series of ANOVAs were used to assess the effects of covariates on dependent variables. Results indicated two incidences where covariates demonstrated a significant relationship with a dependent variable. First, neuroticism, emotional intelligence, and

negative affectivity showed a significant relationship with comprehension for positive content. A second covariance relationship emerged between neuroticism, emotional intelligence, and positive affectivity and comprehension for negative content. Therefore, future analyses and reported means and standard deviations will be adjusted to account the influence of covariates. Next, t-tests were used to evaluate the effectiveness of the emotion type manipulations. Specifically, these t-tests looked at mean differences between perceptions of manipulated basic emotions (e.g., basic emotions happiness, surprise, anger, and anxiety) versus all other possible emotions (e.g., guilt, boredom, bliss, sympathy, etc.) and manipulated blended emotions (e.g., affection, optimism, frustration, and disappointment) versus all other possible emotions.

ANOVAs tested hypotheses for emotion perception and message comprehension (hypotheses 1 through 5). These analyses compared means across conditions on accuracy and inaccuracy indices. ANCOVAs for message comprehension (hypotheses 6 and 7) compared means across conditions on ratings for two comprehension indices, positive content and negative content, accounting for covariates identified in previous analyses.

Hierarchical regressions investigated the impact of emotion type and media richness on performance. For each regression, perception indices were entered in block 1 as a control, comprehension for positive and negative content indices in block 2 as a control, and variables emotion type and media richness were entered in block 3.

Results

Descriptive statistics and zero-order correlations among the dependent variables and covariates are presented in Table 5. In line with prior findings, strong positive relationships were seen between emotion perception and comprehension of congruent

emotional informational (e.g., accuracy for negative emotions was positively correlated with comprehension of negative content). Other relationships were also evidenced. Comprehension of positive content showed strong positive relationship with emotion competence and strong negative relationship with negative affectivity. Comprehension of negative content also showed a strong positive relationship with emotional competence and a positive relationship with need for cognition. It appears possessing emotional competence facilitates emotional information, perhaps aiding the recognition of emotions which in turn mobilizes particular cognitive activities.

Manipulation Check

Two separate t-tests evaluated the effectiveness of the emotion manipulation. For the core emotion condition, the t-test compared perception scores for manipulated and non-manipulated emotions. The first t-test evaluated the effectiveness of the basic emotion manipulation. Results yielded significantly higher mean perception scores for manipulated (M = .56; SD = .23) vs. non-manipulated (M = .30; SD = .14) emotions, $t(59) = 2.20$, $p < .001$, suggesting the manipulation worked as intended. The second t-test evaluated the blended emotion manipulation. Inspection of means revealed significantly higher scores for manipulated (M = .59; SD = .23) vs. non-manipulated (M = .24; SD = .12) emotions, $t(58) = 4.11$, $p < .001$, suggesting the manipulation was effective.

Hypothesis Testing

Five separate fixed effects factor analyses of (ANOVAs/ANCOVAs) were conducted. ANOVAs were used to evaluate hypotheses dealing with emotion perception, and ANCOVAs tested hypotheses pertaining to message comprehension. Table 8 summarizes significant F-scores including significance level and effect size.

Additionally, two hierarchical regression analyses accounting for emotion perception and message comprehension investigated the impact of emotion type and media richness on performance for a creative task.

Hypotheses 1 through 3 look at the influence of emotion type on perception of emotional information in a leader's message. Table 6 shows the means and standard deviations for accuracy and inaccuracy indices by condition. Hypothesis 1 predicted leader's use of basic emotions to result in more accurate emotion perception for positive and negative emotions than leader's use of blended emotions. The ANOVA for perceiving negative manipulated emotions showed significant differences for perception accuracy ($F(1, 119) = 7.27$, $p < .01$, $\eta^2 = .03$) with higher perception accuracy mean for basic negative emotions ($M = .73$, $SD = .34$) versus blended negative emotions ($M = .61$, $SD = .38$). The ANOVA for positive emotions yielded significant differences, but not as predicted with blended emotions ($M = .57$, $SD = .28$) yielding a higher perception accuracy mean than basic emotions ($M = .40$, $SD = .39$), finding partial support for hypothesis 1 ($F(1, 119) = 3.55$, $p = .06$, $\eta^2 = .06$). These results contrast with Study 1 results which did not show any significant differences in perception for basic or blended emotions, possibly indicating that the prior interaction with the leader had more impact than the emotions manipulated in the e-mail.

Hypothesis 2 predicted that the leader's use of basic negative emotions would result in overall more negative emotions seen as present than leader's use of blended negative emotions. Results supported this hypothesis, $F(1, 119) = 9.90$, $p < .01$, $\eta^2 = .08$, with basic emotions ($M = .53$, $SD = .22$) resulting in the perception of more negative emotions in general than blended emotions ($M = .40$, $SD = .23$). The effect of basic

negative emotions were stronger in the present study than in Study 1 which illustrated a similar trend without reaching significance (i.e., means indicated overall more negative emotions checked in the basic versus blended condition but the differences were not significant). The analyses have demonstrated support for hypothesis 2, implying that emotion type does influence the perception negative emotions, and appeared to do so across both e-mail and video communications.

In hypothesis 3, leader's use of basic positive emotions was expected to result in overall more positive emotions seen as present than leader's use of blended emotions. The ANOVA evidenced significant effect for emotion type on perception of positive emotions ($F(1, 119) = 4.49$, $p < .05$, $\eta^2 = .04$). However, inspection of means indicated the reverse effect, with leader's use of blended emotions resulting in more positive emotions reported as present ($M = .45$, $SD = .21$) than basic emotions ($M = .36$, $SD = .24$). It appears the leader's use of less distinct, more subtle emotions led to individuals to see more positive emotions. A similar effect was seen in Study 1 although emotion type interacted with prior leader exposure to influence perception of positive emotions. These findings did not support hypothesis 3.

Hypotheses 4 and 5 looked at the impact of media richness on emotion perception. For hypothesis 4, leader's use of rich media was expected to leader to higher perception accuracy of positive and negative emotion compared to the leader's use of lean media. The ANOVA for positive emotion did not show an effect for media richness on perception accuracy. The ANOVA looking at negative emotion yielded significant differences for media richness ($F(1, 119) = 16.29$, $p < .001$, $\eta^2 = .12$), with means in line with predictions (Rich, $M = .79$, $SD = .32$; Lean, $M = .54$, $SD = .36$). Results suggest

media richness influences accuracy for perceiving negative emotions but not for positive emotions, demonstrating partial support for hypothesis 4.

Hypothesis 5 predicted leader's use of rich media would result in less inaccurate perception of positive and negative emotions compared to leader's use of lean media. The ANCOVA for erroneous perception of negative emotions controlled for emotional intelligence. Results showed that media richness significantly influenced erroneous perception of negative emotions, $F(1, 119) = 5.18$, $p < .05$, $\eta^2 = .04$, but that lean media ($M = .23$, $SD = .16$) resulted in fewer perception errors compared to rich media ($M = .29$, $SD = .16$). The ANCOVA for erroneous perception of positive emotions controlled for neuroticism. While the ANCOVA did not find support for this hypothesis, there was an interaction between emotion type and media richness (see Figure 3). Emotion type and media richness significantly influenced erroneous reports of positive emotions ($F(1, 119) = 4.03$, $p < .05$, $\eta^2 = .04$), with fewest errors seen in the basic emotion, lean media condition ($M = .26$, $SD = .20$) compared to highest erroneous perception of positive emotions when basic emotions were communicated through rich media ($M = .35$, $SD = .13$). Opposite was seen for blended emotions, with lean media eliciting more erroneous perception ($M = .34$, $SD = .20$) compared to rich media ($M = .29$, $SD = .20$). These findings suggest a leader's use of basic emotions increased erroneous perception of positive emotions as communication became richer, and a leader's use of blended emotions increased erroneous perception as media became leaner.

Hypothesis 6 predicted leader's use of basic emotions would result in better message comprehension than blended emotions. Table 7 shows the means and standard deviations for message comprehension of positive and negative content by condition. The

ANOVA for positive organizational content did not show a significant main effect for emotion type on comprehension. The ANCOVA for negative organizational content controlled for neuroticism, emotional intelligence, and positive affectivity. While this hypothesis was not supported, there was a significant interaction between emotion type and media richness for comprehension of negative content (see Figure 4). Emotion type and media richness significantly influenced scores on negative content ($F(1, 119) = 3.73$, $p > .05$, $\eta^2 = .04$) on the message comprehension of negative content (see Figure 2). The mean comprehension score was highest in the Basic-Lean condition ($M = 2.06$, $SD = .58$) followed by Blended-Lean ($M = 1.63$, $SD = .49$) and finally with Basic-Rich ($M = 1.54$, $SD = .49$) and Blended-Rich ($M = 1.51$, $SD = .53$) showing similar comprehension rates. Post hoc Tukey t-tests showed significant differences on comprehension scores between Basic-Lean condition and Basic-Rich condition ($t(58) = -4.65$, $p < .001$), Blended-Rich and Basic-Lean ($t(58) = -4.50$, $p < .001$), and Basic-Lean and Blended-Lean ($t(58) = 3.63$, $p < .001$). Results suggest media richness moderated the effect of emotion type on comprehension of negative material, possibly by controlling the emotional cues used by the leader when delivering the message. Basic emotions resulted in highest comprehension of negative content but only when communicated via e-mail. However, when basic emotions were communicated through rich media, comprehension scores were significantly lower than lean media. The same pattern is seen for blended emotions although difference between lean and rich media conditions was not significant in post hoc comparisons.

For hypothesis 7, it was expected that the use of rich media would facilitate comprehension of positive and negative content. The analysis for comprehension of

negative content showed a significant interaction for emotion type and media richness ($F(1, 119) = 3.73$, $p > .05$, $\eta^2 = .04$) as described in previous paragraph. The ANOVA for positive organization content showed a significant main effect for media richness ($F(1, 119) = 6.05$, $p > .01$, $\eta^2 = .06$) but not as predicted. Comprehension for positive content was higher when delivered via lean media ($M = 1.85$, $SD = .48$) compared to rich media ($M = 1.60$, $SD = .47$). The analyses did not find support for hypothesis 8.

Research questions

Hierarchical regressions investigated the impact of emotion type and media richness on task performance. Table 9 shows the means and standard deviations for performance quality and originality by condition. Question 1 looked at the impact of emotion type on subordinate performance on a creative task while accounting for emotion perception (accuracy and inaccuracy) and message comprehension (positive and negative content). These results are presented in Table 10. Emotion perception indices were entered into block 1 as a control. Message comprehension scores were entered into block 2 as a control. Finally, emotion type was entered into block 3. Results indicated the inclusion of emotion type in block 3 resulted in a significant increase in variance accounted for in performance quality ($\Delta F(4, 115) = 5.59$, $p < .001$), with emotion type yielding a .30 beta weight. Inspection of means evidenced higher performance quality stemming from leader's use of blended emotions ($M = 2.13$, $SD = .67$) compared to basic emotions ($M = 1.94$, $SD = .68$). Additionally, two emotion perception variables also contributed significantly to performance quality. Perception of negative emotions not manipulated positively contributed to performance ($\beta = .36$), and perception of positive emotions not manipulated negatively contributed to performance ($\beta = -.19$). A second

regression examined task originality as the outcome variable with all steps the same. Results did not evidence a significant effect for emotion type. Together, these findings suggest use of subtle, discrete blended emotions can positively contribute to task quality compared to more salient emotions. Implications for leaders will be explored in the next section.

The second question looked at whether media richness impacted subordinate task performance. Again, two hierarchical regressions were run with emotion type entered at step 1, message comprehension at step 2, and media richness at step 3 for quality and originality of task performance. Emotion perception indices were entered into block 1 as a control. Message comprehension scores were entered into block 2 as a control. Finally, media richness was entered into block 3. The first regression designated performance quality as the outcome. Results did not show media richness to contribute significantly to performance quality. The second regression specified performance originality as the dependent variable. Results did not show evidence that media richness significantly contributes to task originality. These findings suggest media richness did not significantly impact performance quality or originality.

Discussion

The purpose of the present study was to investigate the influence of emotion type and media richness on emotion perception, message comprehension, and task performance. Results evidenced the importance of emotion type and media richness on an individual's ability to perceive different emotions and cognitive processing of organizational events. Further, this study provided initial evidence that emotion type impacts performance.

First, analyses showed that emotion type and media richness impacted the perception of emotion. As in Study 1, leader's use of basic negative emotions resulted in higher accuracy for leader emotions as well as more negative emotions in general reported as present with the message. Because leaders are in a position of power, subordinates are thought to be more attuned to their attitudes and behaviors, and therefore likely more sensitive to affective displays (Bono & Ilies, 2006; Dasborough, 2006). Because basic emotions were more easily identified this may have caused subordinates to look for other confirmatory emotional information, resulting in the identification of other negative emotions not present in the message (Carretie et al., 2001; Peeters, 2002). In contrast, leader's use of blended emotions resulted in more accurate identification for positive emotions and generally more positive emotions reported as present in a message. One explanation for this may be due to the inclusion of happiness in the basic emotion manipulation. While this is categorized as a basic emotion, it may actually reflect a general positive affective state and thus be harder to identify accurately than the blended emotions. Basic positive emotions happiness and surprise may possess characteristics that are too broad to allow individuals to identify the emotion (Rozin & Royzman, 2001). The blended emotions of affection and optimism are fairly distinct and may be easier for people to recognize and name accurately.

In addition, the richness of communication channel affected emotion perception such that rich media resulted in more accurate identification for negative emotions as well as more negative emotions in general reported as present. As previously discussed, leaders are in a position of power and typically warrant greater attention from individuals. Also, negative emotions signal the presence of some threat causing attentional resources

to be shifted to interpret and respond to these emotions (Carretie et al., 2001; Clore et al., 1994; Peeters, 2002). Rich media (e.g., video) enabled a larger number and variety of affective cues to be transmitted. Further, the video may have instilled a sense of physical presence, a social presence, which may have increased individual's sense of responsibility and investment (Fulk, Schmitz, & Steinfield, 1990; Lombard & Ditton, 1997; Rogers & Lea, 2005; Short et al., 1976). These findings suggest a leader should consider both the type of emotion to include in a message as well as the channel to be used to communicate emotional information to subordinates. For example, if the leader's goal is to have subordinates become more aware of negative organizational events, results suggest the leader use a lean channel such as e-mail to send a message embedded with basic emotions (e.g., anger and anxiety).

Second, emotion type and media richness impacted message comprehension. Analyses found that lean media, in this case e-mail, facilitated comprehension for positive organizational events. At first glance, this finding is not intuitive as lean media limits the number and type of cues included in a message and may also instill limited responsibility due to its inability to project social presence. However, one can argue these same properties are the reason comprehension is higher for positive information compared to rich media. Put another way, positive emotions communicate a sense of security and all is right in a situation and therefore typically commands little attention. Rich media is likely to amplify these affect. In contrast, an e-mail requires cognitive resources to read the material which also focuses the individual's attention on the positive material. Alternatively, e-mail may have decontextualized emotions from information because of fewer emotional cues, which enabled more cognitive resources to be used to

process the information. Therefore, it may be more useful for leaders to communicate positive information through lean channels such as e-mail when one goal is to provide subordinates a better understanding of positive events. On the other hand, richer channels such as face to face may be the more appropriate medium when the leader's intent is to communicate general positive information for a particular event.

More interestingly, media richness interacted with emotion type to influence comprehension for negative organizational events. Similar to Study 1, comprehension for negative material was best when information included basic emotions (e.g., anger and anxiety) and communicated through a leaner channel (e.g., e-mail). Surprising, the general use of rich channel regardless of emotion type resulted in the lowest comprehension for negative events. One explanation for this finding is that leaner media, in this case e-mail, limited affective cues to a degree that allowed for effective processing of information. Previous research demonstrated negative affect facilitates cognitive activation and processing of negative material (Peeters, 2002; Rozin & Royzman, 2001). However it may be that negative emotions transmitted through rich channels overwhelm the individual, in a sense hijacks the cognitive processes and prevents effective functioning of activities such as message processing. Several implications stem from this finding. First, leaders can use basic negative emotions when communicating negative organizational material as a means to increase subordinate attentional processes. Second, leaders need to consider content of message, in particular the emotional component, before deciding on the method of communicating the message. Specifically, if it is necessary for the leader to include negative emotions, basic or blended, then it may be everyone's best interest to utilize a lean channel such as e-mail.

Third, emotion type was found to impact task performance. Though research exists demonstrating emotion's influence on performance, it has typically focused on broader categorization factors such as valence and not on differences due to emotion type. Therefore we had approached the issue of performance more generally as an investigation versus confirmation of pre-existing research. Analyses showed that the leader's use of blended emotions positively contributed to performance quality defined as implementation process and strategic outlook. Because blended emotions are more subtle, the processing of them may require less cognitive resources than basic emotions. This in turn would allow the individual to allocate more resources to task performance. Interestingly, perceptions of leader's negative emotions impacted performance. Specifically, accurate perception of negative emotions was detrimental to performance. It may be that basic negative emotions without contextual factors overwhelms the individual and prevents mobilization of resources to other activities such as working on a task. In contrast, blended negative emotions may strike the right balance between raised threat levels caused from detection of all negative emotions and mobilization of cognitive resources. In line with some previous research that showed negative emotions detrimental to creative performance, accurate perception hurt quality. However, perception of additional negative emotions positively contributed to quality. Drawing on earlier discussions in particular findings from George and Zhou (2002), it may be that the perception of additional negative emotions increased the individual's emotional clarity, which freed up cognitive resources to be used in completing the task. However, due to limited theoretical and empirical research explanations should be read with caution and explored in future research.

General Discussion

The purpose of these two studies was to examine different ways in which leader emotion can influence subordinates emotion perception, message comprehension, and task performance. This research represents one of the first attempts to directly compare the effects of richer and leaner modes of communication on relevant organizational outcomes. In addition, it represents an initial effort to better understand the relationship between leader emotion type and media richness on subordinate performance quality and originality.

First, emotion type was found to impact emotion perception, message comprehension, and task quality. In line with previous research looking at the universal nature of basic emotions (Ekman, 1992, 1999; Ekman et al., 1987; Shaver et al., 1987), leader's use of basic emotions showed the highest accuracy for negative emotions. In contrast, perception for positive emotions was more accurate when leader's used blended emotions. Additionally, presentation of emotional information through e-mail resulted in no significant differences in perception of negative emotion. These findings suggest emotion perception may be less dependent on the current distinction between salient versus subtle emotion characteristics and more dependent on contextual factors including communication medium (e.g., face versus e-mail), physiological activities (e.g., brain region synapses), and lexical properties (e.g., number of shared words). Perhaps more interestingly, leader's use of blended emotions resulted in better comprehension for negative organizational events and positively contributed to task quality compared to basic negative emotions. Leaders must be careful when choosing to communicate emotionally laden information due to differences on how emotions impact subordinate

perceptions and performance. Ultimately, a leader's decision to use one type of emotion over another should be dependent upon the outcome desired. Emotional intelligence theorists including Mayer, Salovey, and Bar-On argue that the accurate perception of emotions provides useful information for interacting with others. However under some circumstances, accurate perception may be less important when weighed against important organizational outcomes including an understanding of current events and task quality (i.e., seeing more negative emotions positively contributed to performance but seeing more positive emotions was detrimental to performance).

The second contribution of this study was to examine the impact of media richness on leader's communication of emotional information. In general, media richness theory suggests richer communication channels such as face to face would lead to more accurate perception of emotions because of the larger number and variety of cues a leader could use when communicating the emotion (Daft & Lengel, 1984). However, this was not always the case in this study. While richer channels did result in more accurate perception for negative emotions, it also increased erroneous reports of positive and negative emotions. Further, theorists argue richer communication channels decreases ambiguity and increases understanding because more information can be transmitted (Daft & Lengel, 1984; Johnson, Donahue, & Atkin, 1994; Maltz, 2000). However, in this study the opposite was true as lean media resulted in better comprehension for positive and negative organizational events. These findings are interesting for several reasons. First, media richness theory suggests organizations should adopt rich network communication to increase speed and efficiency exchanges of complex information and tacit knowledge and to support extensive collaborative problem solving teams (Daft &

Lengel, 1984; Marginson, King, & McAulay, 2000; Vickery et al., 2004). Second, organizations typically view e-mail as a support function, to be used to follow-up extensive face to face meetings. Employees use e-mail to clarify information or decision and to request additional information and materials as needed (Maznevski & Chudoba, 2000; Vickery et al., 2004). This study demonstrated e-mail can be an effective mechanism for leaders to increase subordinate awareness of organizational issues. However, managers and employees may be reluctant to substitute e-mail for interpersonal meetings. While it is important for the organization to promote an e-mail friendly culture, the onus falls on the leader to promote the acceptance of e-mail. Leaders will need to incorporate e-mail into their interactions with followers, educating employees on the benefits and appropriateness of e-mail usage (Hunter & Allen, 1992; Romm & Pliskin, 1999; Markus, 1994).

Third, this study provided initial evidence that emotion type impacted quality of subordinate performance on a creative task. Leader's use of blended emotions was found to positively contribute to quality on a creative task. Additionally, erroneous perception of negative emotions positively contributed to quality and erroneous perception of positive emotions negatively contributed to quality. While past research has shown leader emotion can have positive and negative affects on subordinate performance (Lewis, 2000; Pirola-Merlo et al., 2002; Seo, Barrett, & Bartunek, 2004), these studies distinguished emotions on valence and arousal properties and not on emotion type which focuses on how cues manifest in an exchange. The subtleness of blended emotions may have motivated individuals to seek out additional negative emotional information to better clarify personal feelings. Drawing from George and Zhou's (2002) findings, increased

self-clarity of negative emotions facilitated performance on the task. However, the search for additional positive emotional information may have served to reduce levels of perceived threat, returning the individual into a more content state, which resulted in diminished task quality. The challenge falls on the leader to effectively use emotions as a means of eliciting better task quality form subordinates. More now than ever, leader's need to possess emotional intelligence to recognize subordinates' current emotional states as well as to effectively utilize different types of emotions. In particular, leader's must be able to switch from using broader, basic emotions to more subtle, distinct emotions on a moments notice, perhaps during an exchange. However, current research does not address whether an emotional intelligent leader is capability of interchanging emotion type so readily and warrants future research.

Limitations and future research

Despite contributions of the current studies, they are not without limitations. First, the current study employed a limited number of emotions. As a rule, there exist only a handful of basic emotions that can be selected for study. The four selected came from established research in the areas of evolution, personality, and emotion. However, the list for blended emotions is much larger and the four selected represents only a small percentage of existing affect. Future research is needed that incorporates the few remaining basic emotions and the larger reservoir of blended emotions looking at affects on emotion perception and other relevant organizational outcomes.

A second limitation is the medium used in manipulating emotion types. The leader's e-mail was delivered as a handout and not present on a computer screen, reducing fidelity. To counter this issue, the experimenter explained it was organizational

protocol to print all e-mails for filing purposes. Further, the handouts were formatted to resemble an e-mail. The second method involved playing a video of a leader delivering the same message verbally. However, we cannot be certain the leader in the video accurately exhibited emotion cues. In an effort to increase cue accuracy, a professor from the acting school at this university was recruited who had previous school and play experience in which he portrayed a variety of emotions. Additionally, cues were extracted from existing performing arts books as well as Ekman's facial coding handbook and incorporated into each skit. Though we feel protocol effectively addressed these weaknesses, it would be useful to replicate procedures in which e-mail was delivered and read using computers and a leader was physically present to deliver the message.

A third limitation deals with the effectiveness of the prior exposure manipulation. Paper scenarios describing a prior leader interaction were used to give the impression of a positive, negative, or neutral experience with one's leader. While manipulation checks did show descriptions to be effective, the manipulation likely did not have the magnitude one would see if the individual had personally engaged in the interaction. However it is important to note that the paper manipulation significantly influenced emotion perception and message comprehension, suggesting one would likely see stronger effects stemming from actual experiences. Additional research using real experiences, even if simulated in a laboratory setting, is needed to see whether effects would be different. In addition, it would be interesting to vary how the exposure context to include other methods common to organizations including virtual net meetings, telephone conferencing, and e-mail exchanges.

Finally, participants were not actually subordinates, but were merely playing a role. The leader was a novel figure, and participants may have spent more time being distracted by the newness of the character than attending to the message. In addition, participants did not have a previous history with the leader created from past experiences with the leader. Employees use history to interpret the leader's behavior and intent, especially when circumstances are more ambiguous. Therefore, the effects of emotion type and media richness on emotion perception and message comprehension may be different for employees who have a history with the leader. This limits the generalizability of these affects, although the gains in experimental control in examining this relatively new topic of communicating emotions through e-mail outweigh this cost.

In general, these findings provide support to the argument that one component of effective leadership is the ability to manage emotions. In line with work by Salovey and colleagues, it has become important for a leader to be able to manage one's own emotions as well as the emotions of others in order to achieve organizational goals. In addition, leaders must be selective in their choice of communication method to exchange information with subordinates. The advent of technology has provided additional, and often time, more convenient channels. However, message characteristics including affective information and detail as well as purpose should weigh more heavily in deciding on how to best delivery the message.

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Table 1

Means, Standard Deviations, and Correlations for all Study Variables

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1.	Perception accuracy	.84	.26	--									
2.	Overall NE perception	.59	.18	.88**	--								
3.	Overall PE perception	.07	.09	-.08	-.11	--							
4.	Neg. 1 comprehension score	1.92	.88	.15	.11	.03	(.92)						
5.	Neg. 2 comprehension score	2.27	.72	-.05	-.08	-.16	.30**	(.91)					
6.	Emotional competence	3.48	.40	.07	.11	-.13	-.01	-.01	(.91)				
7.	Positive affectivity	3.47	.72	.01	.08	.02	.11	.07	.42**	(.87)			
8.	Negative affectivity	1.84	.64	.00	.00	.07	.05	.03	-.45**	-.07	(.86)		
9.	Neuroticism	2.59	.68	.05	.02	.09	.14	.09	-.57**	-.32**	.44**	(.71)	
10.	Need for cognition	2.86	.81	.14	.11	-.04	-.06	-.13	.52**	.24**	-.32**	-.25**	(.93)

Note. NE = negative affect. PE = positive affect. Neg. 1 comprehension score = Board's request. Neg. 2 comprehension score = Department shake up. *$p < .05$; **$p < .01$. $N = 118$.

Table 2

Means and standard deviations for emotion perception task by condition

Condition (Emotion/PI)	Perception Accuracy	Overall Perception of Emotions	
		Positive	Negative
Basic/Positive	.80 (.30)	. 06 (.07)	.59 (.21)
Basic/Negative	.88 (.22)	.06 (.08)	.66 (.13)
Basic/Neutral	.80 (.30)	.07(.07)	.60 (.20)
Blended/Positive	.83 (.29)	.10 (.09)	.55 (.17)
Blended/Negative	.89 (.21)	.03 (.05)	.65 (.16)
Blended/Neutral	.82 (.25)	.13 (.11)	.52 (.15)

Note. PI = nature of prior leader exposure. Standard deviation in parentheses. $N = 118$.

Table 3

Means and standard deviations for message comprehension task by condition

Condition (Emotion/PI)	Board's Request	Departmental Shake Up
Basic/Positive	1.93 (.97)	2.57 (.56)
Basic/Negative	1.68 (.79)	2.37 (.69)
Basic/Neutral	2.03 (.86)	2.38 (.66)
Blended/Positive	1.95 (.94)	1.97 (.78)
Blended/Negative	1.68 (.86)	2.09 (.74)
Blended/Neutral	2.21 (.84)	2.23 (.82)

Note. PI = nature of prior leader exposure. Standard deviation in parentheses. N = 118.

Table 4.

Summary of Significant Results from ANOVAs on Criteria.

Prior Leader Exposure	*F*	*df*	*p*	η^2
Inaccuracy Negative Emotion	3.48	1, 117	.05	.06
Emotion Type				
Departmental Shake up	6.92	1, 117	.01	.06
Prior Leader Exposure x Emotion Type				
Inaccuracy Positive Emotion	4.10	1, 117	.05	.07

Table 5

Means, Standard Deviations, and Correlations for all Study Variables

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	Prcptn acc PE	.48	.36	--														
2.	Prcptn acc NE	.67	.35	.14	--													
3.	Overall PE prcptn	.41	.23	.94**	-.08	--												
4.	Overall NE prcptn	.47	.23	-.13	.95**	-.05	--											
5.	Err PE prcptn	.33	.18	.07	.43**	.72**	.14	--										
6.	Err NE prcptn	.26	.17	-.06	.50**	.05	.74**	.24**	--									
7.	Pos. comp score	1.71	.51	-.11	.43**	-.07	.24**	.15	.06	(.74)								
8.	Neg. comp score	1.70	.56	-.07	.00	-.08	.07	-.08	.21*	.31**	(.73)							
9.	Plan quality	2.03	.68	-.02	.19*	-.05	.23*	-.08	.24*	.13	.12	(.77)						
10.	Plan originality	2.29	1.12	.05	.19*	.08	.21*	.11	.19*	.07	.02	.62**	(.79)					
11.	Emtnl competence	3.51	.39	.12	-.04	.17	-.02	.20*	.02	.28**	.19*	.21*	.16	(.93)				
12.	Positive TA	3.63	.68	-.01	.07	.04	.10	.13	.14	.07	.13	.22*	.10	.52**	(.86)			
13.	Negative TA	1.86	.63	-.17	.10	-.15	.10	-.04	.06	-.26**	-.15	.03	.16	-.41**	-.06	(.85)		
14.	Neuroticism	2.58	.64	-.12	-.01	-.16	-.08	-.15	-.20*	-.19	-.17	-.20	-.13	-.58**	-.51**	.41**	(.66)	
15.	Need for cog	3.82	.81	-.01	.10	.01	.09	.05	.03	.08	.22*	.16	.18*	.46**	.27**	.01	-.23*	(.91)

Note. Prcptn acc PE = Accurate perception of positive emotions; Prcptn acc NE = Accurate perception of negative emotions; Overall PE prcptn = Inaccurate perception of perception of positive emotions; Overall NE prcptn = Inaccurate perception of perception of negative emotions; Err PE prcptn = Erroneous perception of positive emotions; Err NE prcptn = Erroneous perception of negative emotions; Pos. comp score = Comprehension score for positive content; Neg. comp score = Comprehension score for negative content; Emtnl competence = Emotional competence; Positive TA = Positive trait affect; Negative TA = Negative trait affect; Need for cog = Need for cognition. *$p < .05$; **$p < .01$. $N = 120$.

Table 6

Means and standard deviations for emotion perception task by condition

Condition (Emotion/Richness)	Perception Accuracy		Overall Perception of Emotions	
	Positive	Negative	Positive	Negative
Basic/Rich	.33 (.38)	. 87 (.26)	.34 (.22)	.61 (.16)
Basic/Lean	.47 (.39)	.58 (.35)	.38 (.25)	.44 (.25)
Blended/Rich	.53 (.26)	.72 (.36)	.42 (.48)	.44 (.22)
Blended/Lean	.60 (.31)	. 50 (.37)	.48 (.21)	.33 (.22)

Note. Standard deviation in parentheses. $N = 120$.

Table 7

Adjusted means and standard deviations for message comprehension task by condition

Condition (Emotion/Richness)	Positive Message Content*	Negative Message Content**
Basic/Rich	1.59 (.45)	1.54 (.49)
Basic/Lean	1.76 (.45)	2.06 (.58)
Blended/Rich	1.61 (.49)	1.51 (.53)
Blended/Lean	1.92 (.50)	1.63 (.49)

Note. * = means adjusted for neuroticism, emotional intelligence, and negative affectivity; ** = means adjusted for neuroticism, emotional intelligence, and positive affectivity. Standard deviation in parentheses. $N = 120$.

Table 8.

Summary of Significant Results from ANOVAs/ANCOVAs on Criteria.

Emotion Type	*F*	*df*	*p*	η^2
Accuracy Positive Emotions	7.27	1, 119	.01	.06
Accuracy Negative Emotions	3.53	1, 119	.05	.03
Inaccuracy Negative Emotion	9.90	1, 119	.01	.08
Inaccuracy Positive Emotion	4.49	1, 119	.05	.04
Media Richness				
Accuracy Negative Emotions	16.29	1, 119	.001	.12
Erroneous Negative Emotion	5.18	1, 119	.05	.04
Positive Content	6.05	1, 119	.01	.06
Emotion Type x Media Richness				
Erroneous Positive Emotion	4.03	1, 119	.05	.04
Negative Content	3.73	1, 119	.05	.04

Table 9

Adjusted means and standard deviations for creative advertising task by condition

Condition (Emotion/Richness)	Plan Quality*	Plan Originality*
Basic/Rich	1.85 (.64)	2.23 (1.30)
Basic/Lean	2.02 (.73)	2.19 (1.14)
Blended/Rich	2.13 (.67)	2.35 (0.93)
Blended/Lean	2.12 (.69)	2.39 (1.13)

Note. * = means adjusted for perception accuracy, overall perception of emotions, positive message content, and negative message content. Standard deviation in parentheses. $N = 120$.

Table 10

Summary of Regression Analyses Examining Relationship of Emotion Type as an Antecedent of Performance Quality

Model	B	Δ*F*	*p*
Quality			
Block 1: Emotion Perception			
Accurate perception NE	.13	2.78	.01
Accurate perception PE	-.02	2.78	.01
Erroneous perception NE	.36*	2.78	.01
Erroneous perception PE	-.18**	2.78	.01
Block 2: Comprehension			
Positive content	.09	1.32	.27
Negative content	.02	1.32	.27
Block 3: Criteria			
Emotion type	.30**	5.59	.01

Note. β = standardized regression coefficients in the final model. Δ*F* = incremental change in variance accounted for by the additional step in the regression equation. **p* = .08; ***p* < .01. *N* = 120.

Figure 1. Description of participant's job responsibilities in a fictitious organization.

Role within department: You are one of 12 advertising agents whose role is to develop print advertisements (e.g., popular magazines and newspapers) for contracted businesses. You handle two types of clients. The first type is the newly established business trying to build a consumer base, in which your advertisements are meant to allure new customers to the product. The second type is the business wishing to expand consumer base to include other types of consumers and still appeal to current costumers. Therefore, you develop advertisements that appeal across demographical characteristics such age and gender. Currently, you are only equipped to design print advertisements, but will soon have the software and technology to also create advertisements to be aired on television.

Figure 2. Interaction between prior leader exposure and emotion type on positive affect perception.

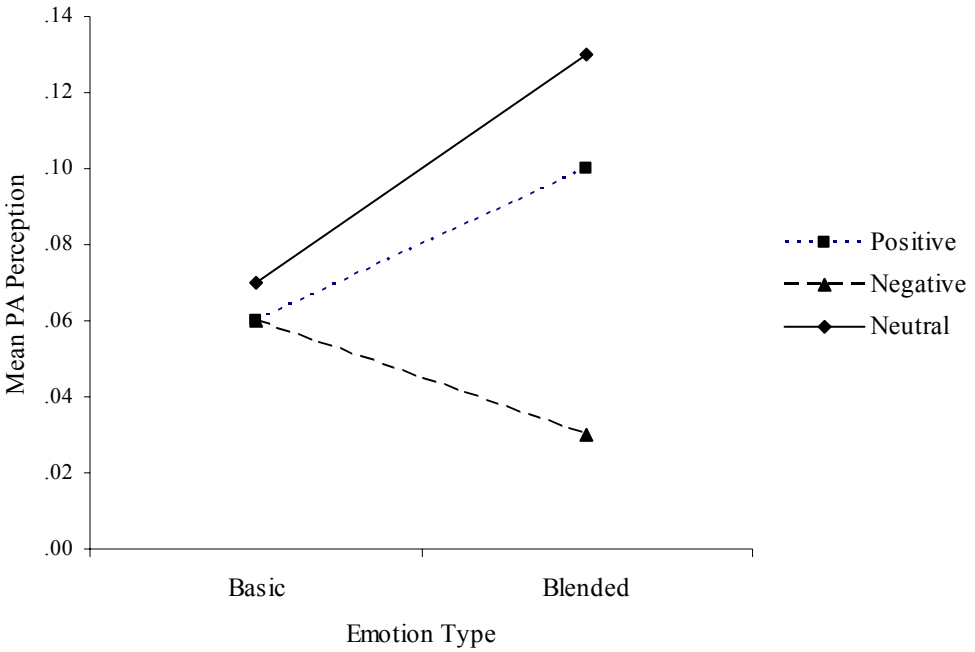


Figure 3. Interaction media richness and emotion type on erroneous perception of positive emotions.

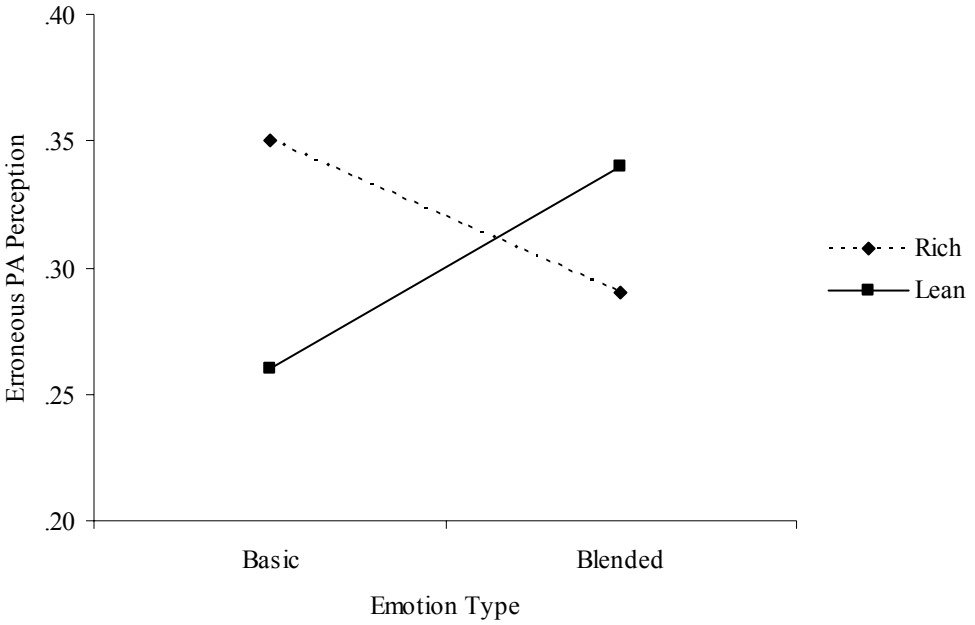
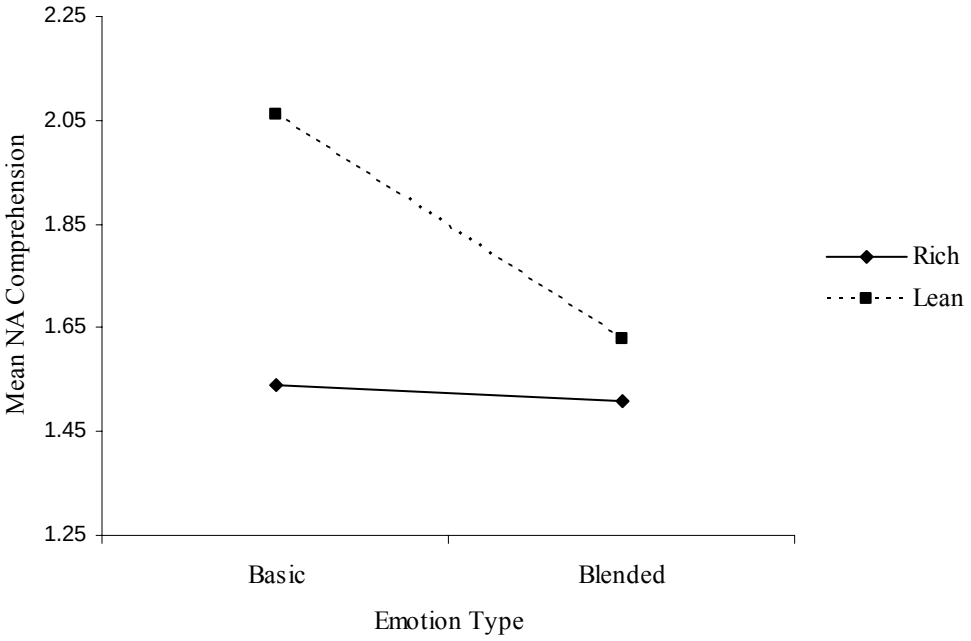


Figure 4. Interaction media richness and emotion type on negative message comprehension.



PRIOR LEADER INTERACTION MANIPULATION - NEGATIVE

You were just present at a departmental meeting where your department's director had a total meltdown. Although no official news posting has been sent out, everyone has heard the rumors that our current clients are not optimistic about the business merger. More specifically, the local businesses do not believe that once our market expands from regional to nation-wide *In Print, Inc*. will no longer value their business and the quality of advertising will decrease. The director has provided evidence for this rumor as he erupts in the middle of the meeting. The company that *In Print, Inc*. is merging with made some hasty policy decisions that resulted in the loss of one of *In Print, Inc*.'s largest clients. At this point the director begins to shout, "Those morons over there have no clue what is going on and that this is a delicate time for every one. They need to pay more attention to how our clients are reacting to the merger. If I had my way, all of those idiots would be fired for losing that huge contract!" Upon finishing these statements, the director stormed out of the room.

PRIOR LEADER INTERACTION MANIPULATION - POSITIVE

You were just present at a departmental meeting where your department's director was in a great mood. Although no official news posting has been sent out, everyone has heard the rumors that our current clients are not optimistic about the business merger. More specifically, the local businesses do not believe that once our market expands from regional to nation-wide *In Print, Inc*. will no longer value their business and the quality of advertising will decrease. Before the meeting even started, the department leader stood and announced, "Over the past week, the sales department from *Ads Are Us, Inc*. finalized a deal with a multi-million dollar client who distributes tickets for local sporting and entertainment events. This is a huge win for us too as we proceed with the merger!" Upon finishing these statements the director smiled and left the room.

PRIOR LEADER INTERACTION MANIPULATION - NEUTRAL

You were just present at a weekly departmental staff meeting were you and your colleagues all met in a large conference room. The meeting always begins promptly at 8:05 a.m. and serves duel purposes. First, the departmental director takes the opportunity to communicate the weekly agenda including upcoming activities as well as assigning work roles. Second, it gives all employees including the director the opportunity to mingle, enjoy some refreshments, and generally get back into the swing of organizational life.

STUDY 1 LEADER E-MAIL – BASIC EMOTIONS

To:	Employees of Advertising Department
From:	Director of Advertising Department
Subject:	Departmental update: Merger and restructuring

Members of the Advertising Dept.:

With the merger comes organizational restructuring. Because *Ads Are Us, Inc*. employs a similar sales department, they want to avoid replication of functions. Our CEO has instructed me to construct a detailed report of what we do, how we operate, projects and campaigns completed in the last five years, and more. This will take a lot of time and effort to put together and is totally unnecessary since we just did this for the Board of directors 6 months ago. This is a complete waste of valuable resources which comes at one of our busiest times of the year. Additionally, some of the new VPs have implied that we won't be able to hold our own once the merger is done. I'm outraged that they are judging us when they have no numbers, data, or anything else to back up their views (**Anger**).

I've been checking into some of their past mergers to better understand what to expect. From what I can tell, *Ads Are Us, Inc*. often retains more employees from their own ranks than from the companies they merge with. In a few cases they fired every single person in the other company. I'm afraid that we are likely to lose people from our department. (**Fear**)

STUDY 1 LEADER E-MAIL – BLENDED EMOTIONS

To:	Employees of Advertising Department
From:	Direct of Advertising Department
Subject:	Departmental update: Merger and restructuring

Members of the Advertising Dept.:

With the merger comes organizational restructuring. Because *Ads Are Us, Inc*. employs a similar department, they want to avoid replication of functions. Our CEO has instructed me to construct a detailed report of what we do, how we operate, projects and campaigns completed in the last five years and more. This will take a lot of time and effort to put together and as all of you know this is one of our busiest times of the year. I told our CEO and VPs that the same information exists in our annual reports, but they want it in a specific and totally different format in a separate report. I've also asked multiple people for clarification on some components of this report but no one is getting back to me (**Frustration**).

I've been checking into some of their past mergers to better understand what to expect. From what I can tell *Ads Are Us, Inc*. likes to run things their own way, adhering to their rules and employees. I had hoped they would be open to some of our ideas, but it doesn't look like that will be the case. Also, our current teams are likely to be split up, something I was hoping wouldn't happen. (**Disappointment**).

STUDY 2 LEADER E-MAIL – BASIC EMOTIONS

To:	Employees of Advertising Department
From:	Director of Advertising Department
Subject:	Departmental update: Merger and restructuring

Members of the Advertising Dept.:

Yesterday marked a pivotal point in our company history, as we begin the merger process with the exclusive television advertising firm *Ads Are Us, Inc*. This is a new period for all of us as the business transforms us into a new and more competitive economic force. The new resources, including the latest computer technology, software and the realm of television advertising, will only strengthen our ability to serve our clients well. (**Happiness**)

Although Wallstreet has not favored these kinds of mergers in the past, they have reacted favorably to our merger with *Ads Are Us, Inc*., with company stocks reaching an unprecedented value of $20.00 per share. Considering early estimates had stock values plateauing at $14.50, we are truly fortunate for this unexpected and fortuitous turn of events. Amazingly, our company has agreed to double every employee's current shares, meaning your retirement 401K plan will more than double by the time the merger is complete. (**Surprise**)

With the merger comes organizational restructuring. Because *Ads Are Us, Inc*. employs a similar sales department, they want to avoid replication of functions. Our CEO has instructed me to construct a detailed report of what we do, how we operate, projects and campaigns completed in the last five years, and more. This will take a lot of time and effort to put together and is totally unnecessary since we just did this for the Board of directors 6 months ago. This is a complete waste of valuable resources which comes at one of our busiest times of the year. Additionally, some of the new VPs have implied that we won't be able to hold our own once the merger is done. I'm outraged that they are judging us when they have no numbers, data, or anything else to back up their views (**Anger**).

I've been checking into some of their past mergers to better understand what to expect. From what I can tell, *Ads Are Us, Inc*. often retains more employees from their own ranks than from the companies they merge with. In a few cases they fired every single person in the other company. I'm afraid that we are likely to lose people from our department. (**Fear**)

STUDY 2 LEADER E-MAIL – BLENDED EMOTIONS

To:	Employees of Advertising Department
From:	Direct of Advertising Department
Subject:	Departmental update: Merger and restructuring

Members of the Advertising Dept.:

Yesterday marked a pivotal point in our company history, as we begin the merger process with the exclusive television advertising firm *Ads Are Us, Inc*. It takes hard work and a successful clientele to garner the attention of a television advertising firm, let alone to initiate a multi-billion dollar merger. The fact this company selected us out of many competitors speaks volume of the quality of performance and our ability to contribute to the firm's vision. (**Affection**) With the merger comes access to new challenges that we as a team will strive to meet. In the past, each of you has performed beyond expectations when I needed it the most and I thank you for your commitment. We are not merely a department, but a family with a strong support system.

Initial reactions from Wallstreet have been positive, with some analysts speculating company stock could reach a high of $20.00 per share. If this comes to pass, each employee's retirement 401K plans could possibly double by the time the merger is complete. The outlook for our retirement plan is very good. (**Optimism**)

With the merger comes organizational restructuring. Because *Ads Are Us, Inc*. employs a similar department, they want to avoid replication of functions. Our CEO has instructed me to construct a detailed report of what we do, how we operate, projects and campaigns completed in the last five years and more. This will take a lot of time and effort to put together and as all of you know this is one of our busiest times of the year. I told our CEO and VPs that the same information exists in our annual reports, but they want it in a specific and totally different format in a separate report. I've also asked multiple people for clarification on some components of this report but no one is getting back to me (**Frustration**).

I've been checking into some of their past mergers to better understand what to expect. From what I can tell *Ads Are Us, Inc*. likes to run things their own way, adhering to their rules and employees. I had hoped they would be open to some of our ideas, but it doesn't look like that will be the case. Also, our current teams are likely to be split up, something I was hoping wouldn't happen. (**Disappointment**).

STUDY 1 MANIPULATION CHECK: REACTION QUESTIONS TO PRIOR INTERACTION

1. In a sentence or two, please describe your general impression towards the director of the department following this meeting.

_____

_____

_____

_____

_____

_____

2. In a sentence or two, please describe how you felt after leaving this departmental meeting.

_____

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Emotion Identification Task

Following is a list of emotions which you will use for current rating task. Please read each emotion carefully and put a check next to each emotion that was present in the leader's e-mail. Do this for all emotions.

_____	Optimism	_____	Jealousy	_____	Sadness	_____	Relief
_____	Sorrow	_____	Passion	_____	Disgust	_____	Happiness
_____	Anger	_____	Anguish	_____	Affection	_____	Regret
_____	Bliss	_____	Panic	_____	Hope	_____	Pessimism
_____	Anxiety	_____	Sympathy	_____	Grief	_____	Shame
_____	Surprise	_____	Awe	_____	Fear	_____	Boredom
_____	Distress	_____	Bitterness	_____	Contentment	_____	Love
_____	Disappointment	_____	Loathing	_____	Pride	_____	Self-assurance
_____	Interest	_____	Jolliness	_____	Guilt	_____	Admiration
_____	Excitement	_____	Eagerness	_____	Frustration	_____	Envy

Message Comprehension Task

Restate the leader's original message word for word as best as you can.

Performance Task

INTEROFFICE MEMORANDUM

TO: ADVERTISING AGENT

FROM: DIRECTOR OF ADVERTISING DEPARTMENT

SUBJECT: CLIENT ADVERTISING STRATEGY

DATE: 12/13/2006

CC: BOARD OF TRUSTEES

It has come to our attention that our established clients are unsure whether our firm will continue to meet their advertising needs. Basically, they are content using print advertisements in local magazines and do not believe television advertisements will add to their profit margins. However, we here at *In Print, Inc*. feel all our clients would benefit from advertisements we develop for local stations. Therefore, I am charging you with the *Health is Life,* a local health food store that offers organic food products, dietary and muscle building supplements, and health screening and seminars. Currently, this business contracts us to advertise in local newspapers and mailbox flyers. It is your responsibility to create an advertising campaign that illustrates the advantages television has over print for product and service disposure.

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