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MORE THAN A FEELING: AN EXAMINATION OF MIXED EMOTIONAL EXPRESSIONS ON LEADER EVALUATIONS AND FOLLOWER PERFORMANCE

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF PSYCHOLOGY

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Abstract

Leader emotional expressions are a central component of effective leadership and have received substantial attention in the leadership literature due to the interpersonal effects of emotion. This laboratory study (N = 266) compares the effects of discrete and mixed emotional displays on evaluations of leader competence, perceptions of leader communication effectiveness, and follower task performance. This study also examines the moderating influence of situation uncertainty and follower characteristics as well as the mediating effects of follower emotional reactions and cognitive inferences on the relationship between leader emotional displays and leadership effectiveness. Findings demonstrate that leader expressions of pride and positive mixed emotions (i.e., pride and interest) resulted in more favorable evaluations of leader competence and communication effectiveness compared to negative mixed, mixed valence, and anger displays. Furthermore, this relationship was mediated by both follower emotions and follower inferences concerning the appropriateness of the leader's emotional display. In contrast, negative mixed emotions (i.e., anger and fear) elicited greater information processing in followers than mixed valence, positive mixed, and anger displays, and this information processing positively influenced follower task performance. Similar information processing effects were also found for pride when compared to positive mixed emotions. No effects were found for situational uncertainty or follower epistemic motivation and emotional intelligence. Implications and future directions for research on leader emotion and mixed emotions are discussed.

Introduction

Leader emotional expressions are, in part, a key mechanism by which leaders drive perceptions and behavior in the workplace as well as motivate followers to pursue organizational goals. Recollections of effective organizational leaders often elicit feelings stemming from the leader's emotional impact and engender images of their emotion-laden actions. From passionate vision statements to everyday leader-follower interactions around the office, leader emotional displays are recognized as a fundamental component of effective leadership given the interpersonal nature of the leadership process (e.g., Dasborough & Ashkanasy, 2002) and social functions of emotional expressions (e.g., Keltner & Haidt, 1999). Consequently, research focusing on leadership and emotion has steadily developed over the past decades and emphasized the influence of leader emotional displays (Ashkanasy & Tse, 2000; Gooty, Connelly, Griffith, & Gupta, 2010; van Knippenberg & Van Kleef, 2016). This research has empirically established the impact that leader emotional displays have on leader perceptions (Bono & Ilies, 2006; Damen, van Knippenberg, & van Knippenberg, 2008; Schaumberg & Flynn, 2012), workplace attitudes (Connelly & Ruark, 2010), and follower performance (Koning & Van Kleef, 2015; Visser, van Knippenberg, Van Kleef, & Wisse, 2013; Waples & Connelly, 2008).

Leaders, verbally and non-verbally, display their emotions in leader-follower settings (Van Kleef, Homan, Beersma, & van Knippenberg, 2009), with purposeful intent or as incidental reactions to organizational situations. Leaders may express pride in their team members following strong performance, display anger when subordinates exhibit low levels of effort, convey optimism when communicating about the future state of the organization, or express fear in the face of an organizational crisis. Early studies on leader emotional expressions examined

the differences between positive affect and negative affect, generally finding a positive effect for displays of positive affect (Awamleh & Gardner, 1999; Bono & Ilies, 2006) and mixed results for displays of negative affect on leadership outcomes (Sy, Côté, & Saavedra, 2005). More recent work, on the other hand, suggests there is a benefit to both positive and negative emotional expressions by leaders depending on the context and the reason for their occurrence (van Knippenberg & Van Kleef, 2016). Specifically, leadership scholars have begun to clarify the influence of affective displays by expanding the conceptualization of leader emotion through examining the activating potential of emotions (Connelly & Ruark, 2010; Waples & Connelly, 2008) and studying the effects of discrete emotions (e.g., anger, happiness; Van Kleef et al., 2009). Furthermore, van Knippenberg and Van Kleef (2016) note that conflicting findings in the leader emotion literature have led to the consideration of contingencies, including moderating (e.g., task type, Visser et al., 2013; responsibility, Madera & Smith, 2009) and mediating effects (e.g., emotional contagion, Johnson, 2009; performance inferences, Van Kleef et al., 2009). Overall, this work has demonstrated the value of leader emotional displays, followers' perceptions of leader expressions, and the manner in which they contribute to the leadership process.

Yet, few studies have fully explored the complexities of emotion within the leadership domain. As pointed out by Madera and Smith (2009), research on leader expressions has often ignored combination of emotions even though organizational stimuli can elicit multiple discrete feelings. As illustrated above, the majority of research has examined displays of global affect or specific positive and negative emotions. However, the demands imposed on leaders, including ill-defined organizational problems, changing business landscapes, and high-stakes, ambiguous decisions, indicate that leaders may encounter more complex emotional experiences than the

feeling states typically considered in the literature (Rothman & Melwani, 2017). For instance, Hassett, Reynolds, and Sandberg (2018) found that top managers experienced emotional ambivalence during the merger and acquisition process. Specifically, managers reported feeling positive and negative emotions simultaneously as well as contrasting same-valenced emotions (Hassett et al., 2018). Mixed and complex emotional experiences are increasingly referenced in organizational research (e.g., Ashforth, Rodgers, Pratt, & Pradies, 2014; Berrios, Totterdell, Kellett, 2015; Bledow, Rosing, & Frese, 2013; Pratt, 2000), indicating these feelings are pervasiveness in organizational settings. Emotional complexity, therefore, represents a concept worthy of examination within the context of leadership.

Rothman and Melwani (2017) define emotional complexity as "the experience of at least two different emotional states during the same emotional episode" (p. 260) and it encompasses a variety of emotion constructs, including mixed emotions, emotional ambivalence, affective transitions. Occurring sequentially or simultaneously, emotional complexity involves the experience of emotions that contrast on valence, cognitive appraisal dimensions, or regulatory focus among others. For example, feeling both fear and anger is a mixed emotional experience given the conflicting appraisals associated with these states (e.g., uncertainty vs. certainty, individual vs. situational agency; Ellsworth & Scherer, 2003) as well as feeling both happiness and sadness given their contrasting valence. Prior research has traditionally framed emotional complexity as dysfunctional due to its association with conflict and ambivalence. However, scholars have recently recognized the benefits of mixed emotions (e.g., Rothman, Pratt, Rees, & Vogus, 2017; Schuh et al., 2016) and suggest that these experiences may represent a more developed reaction to organizational events. Specifically, Rothman and Melwani (2017) argue that leader expressions of complex emotions can be beneficial in interpersonal settings as mixed

emotional displays express the leader's understanding of the situation and signal leader openness and cognitive flexibility.

Building on functional perspectives of emotion (Keltner & Haidt, 1999), the purpose of the current effort is to expand the literature on emotional displays and leadership effectiveness by investigating the impact of mixed emotional expressions on leadership effectiveness outcomes, including leader evaluations, follower perceptions of leader communication effectiveness, and follower task performance. Specifically, the present study will compare the effects of different types of mixed emotions, including negative mixed emotions, mixed valence emotions; and positive mixed emotions, to discrete positive and negative emotions. Additionally, this study assesses the boundary condition of situational certainty and the moderating effect of follower characteristics, namely epistemic motivation and emotional intelligence, on leader emotional expressions. Furthermore, drawing on the emotions as social information model (Van Kleef, 2009), this study examines the mediating effects of emotional reactions and follower inferences on the relationship between leader emotion and leadership outcomes.

Emotional Complexity and Mixed Emotional Experiences

Prior scholarly work regarding emotional complexity and mixed emotions has debated the extent to which these emotional states occur, with some theorists arguing that contrasting emotional experiences are mutually exclusive (Russell, 1980). Circumplex models of emotion, which place emotions along two bipolar dimensions of arousal (i.e., deactivation to activation) and valence (i.e., unpleasant to pleasant), argue that the experience of emotion along one side of the continuum precludes the experience of emotion on the opposite side (Barrett & Russell, 1999). This assumption presumes that positive emotional states prevent individuals from feeling negative emotional states. However, people encounter situations, in their daily lives (e.g.,

bittersweet events) and in the workplace (e.g., organizational change), that can elicit emotional responses that are more complex than "positive" and "negative" emotions. Empirical studies of mixed emotions (e.g., Carrera & Oceja, 2007; Larsen & McGraw, 2011; Scherer & Tannenbaum, 1986) provide support for the experience of emotional states that contrast on valence and arousal.

Previous research on emotional complexity in psychological and organizational domains has focused on the dysfunctional nature of these emotional states. Rothman et al. (2017) highlight that mixed emotions are associated with cognitive inflexibility (e.g., indecisiveness, confirmation bias), avoidance of change, and reduced psychological well-being. Specifically, these emotional experiences are considered maladaptive as they can lead to rumination (van Harreveld, van der Pligt, & de Liver, 2009), incite a resistance to change (Piderit, 2000), and are related to higher levels of depression and lower self-esteem (Kuppens, Van Mechelen, Nezlek, Dossche, & Timmermans, 2007). Conversely, literature also points to the potential benefits of emotional complexity. Fong (2006), for instance, found mixed emotions to improve the consideration of alternative perspectives and relationships during a creative task. Rees, Rothman, Lehavy, and Burks (2013) found that individuals experiencing mixed emotions displayed more accurate judgements due to increased openness to alternative perspectives. Considering that mixed emotions are likely to arise from appraisals of change and conflict, and that emotions possess communicative functions (Keltner & Haidt, 1999), leader displays of mixed emotions may be functional for leader-follower interactions in complex organizational situations.

The Influence of Leader Emotional Displays

Emotional displays have interpersonal consequences (Hatfield, Cacioppo, & Rapson, 1993; Keltner & Gross, 1999). Emotional expressions convey one's feelings and behavioral intentions to observers, communicate information about the expresser and environment, elicit

complementary emotions in others, and direct attention toward goal-related behaviors (Keltner & Haidt, 1999). Van Knippenberg and Van Kleef (2016) note that studies on emotion in leadership have primarily focused on the influence of leader emotional expressions. Leaders display emotion during feedback (Gaddis, Connelly, & Mumford, 2004; Johnson & Connelly, 2014), when communicating organizational visions (Waples & Connelly, 2008), during times of crisis (Madera & Smith, 2009), in negotiations (Van Kleef, De Dreu, & Manstead, 2004), and in day-to-day organizational life. Leader emotions are, therefore, ubiquitous to almost all interactions leaders have with followers at work. The current state of the literature on leader emotional displays draws heavily from social functional perspectives of emotions, such as the emotion as social information model (Van Kleef, 2009), to describe the mechanisms by which leader emotions influence effective leadership.

The emotions as social information (EASI) model described by Van Kleef (2009) suggests that emotional displays influence followers through two central mechanisms: (1) emotional contagion and (2) cognitive interpretation. Leader emotional displays are argued to be contagious such that expressions of emotion elicit similar emotional reactions in followers. Followers may experience emotional convergence with leaders based on the tendency for individuals to automatically mimic and synchronize with the emotional expressions of others (Hatfield et al. 1993). For instance, Visser et al. (2013) found that the effect of leader happiness on follower creative performance is mediated by follower feelings of happiness, demonstrating that followers can "catch" the emotional displays of leaders. Bono and Ilies (2006) found that leader positive emotional experiences related to follower feelings of positive emotion. Similarly, Johnson (2009) found that leader mood influenced follower mood such that followers were more likely to report feeling positive (negative) moods following displays of leader positive (negative)

mood. Subsequently, follower moods influenced both leader evaluations and follower performance (Johnson, 2009). The ability of followers to emotionally converge with leader emotion suggests that follower emotional responses to leaders influence subsequent workplace behaviors (Van Kleef, 2009).

Leader emotional displays not only influence followers through affective reactions, but through follower interpretations of leader emotional expressions as well. Specifically, followers make attributions about their leader, such as their intentions and personality, and the situation from emotional displays (Van Kleef, 2009; Schwarz & Clore, 1983). These attributions, in turn, can influence follower judgments and performance. Melwani, Mueller, and Overbeck (2012) found that displays of contempt and compassion affected perceptions of leadership, such that individuals who expressed contempt and compassion were seen as more intelligent based on the match between these emotions and implicit leadership beliefs. Eberly and Fong (2013) demonstrated that the relationship between leader emotional displays and follower perceptions of leader effectiveness was mediated by follower attributions of leader sincerity. Taken together, these results demonstrate that leader emotional displays are an important component of leadership effectiveness given the effect that emotional expressions have on follower emotion and cognition.

Displays of Mixed Emotions: Affective and Cognitive Pathways

Displays of mixed emotions may be different from leader expressions of discrete emotions or general affect in terms of their influence on followers. Whereas expressions of discrete emotions involve a consistent display of an emotion (e.g., anger), emotionally complex expressions involve displays of mixed, often inconsistent, emotions (e.g., anger and happiness). Whereas past research has demonstrated that distinguishing features of an emotional display,

such as arousal (Connelly & Ruark, 2010) or regulatory focus (Venus, Stam, & van Knippenberg, 2013), are a driver in influencing followers, the blended nature of complex emotional displays suggests that these emotions may influence followers in unique ways.

Emotional contagion route. Rothman and Wiesenfeld (2007) discuss that most research concerning emotional reactions to emotional expressions deals with simple emotions rather than complex and/or mixed emotional displays. While leader displays of discrete emotions or affect can evoke complementary emotional reactions via an emotional transferal process (Barsade, 2002; Bono & Ilies, 2006; Damen et al., 2008; Sy et al., 2005), complex emotional displays may be much more difficult to "catch". The diverging appraisals, valence, and/or action tendencies of complex emotions suggest followers may be less susceptible to emotional contagion because conflicting appraisals could be salient. Along these lines, Rothman and Wiesenfeld (2007) argue that it is difficult for observers to emotionally respond to emotionally complex expressions given an increased level of ambivalence and that observers are more likely to respond with feelings of frustration rather than a reciprocal emotion. However, given the motivating force of emotional feeling states and empirical evidence of follower affective reactions, examining follower emotional reactions to mixed emotional displays is critical as it represents a key mechanism of influence. Thus, the first research question:

> *Research Question 1:* How will followers emotionally react to displays of mixed emotional expressions?

Cognitive interpretation route. Followers also use emotional displays as information to make attributions about their leader (Shao, Wang, & Tse, 2018; Van Kleef, 2009). Following leader displays of emotion, followers will try to understand the dispositional elements underlying the leader's expressed emotion (Eberly & Fong, 2013). Emotion theorists suggest that observers

engage in a process of backtracking in order to comprehend emotional displays (Elfenbein, 2007). In attempting to gather information from leader emotion, followers may cognitively reconstruct the emotion process of the leader by envisioning the emotion-eliciting event in order to understand the thought process, intentions, and characteristics of the leader (Eberly & Fong, 2013).

Inferences of emotional display appropriateness. Emotional expressions provide information to followers from which judgments can be made about a leader's personality or competence (Hareli & Hess, 2010; Lewis, 2000), including sincerity (Eberly & Fong, 2013) and intelligence (Melwani et al., 2012). Individuals perceive those expressing anger as hostile, dominant, and competent (Sinaceur & Tiedens, 2006, Tiedens, Ellsworth, & Mesquita, 2000; Van Kleef et al., 2004), those expressing sadness as weak and incompetent, but also likable (Tiedens, 2001), those expressing pride as confident and of high status (Martens, Tracy, & Shariff, 2012), for example. Following displays of emotional complexity, there is reason to suggest that followers may make judgments regarding the appropriateness of the emotional display, or extent to which the emotion is correct for the situation. Therefore, follower perceptions of the leader may be influenced by the extent to which they perceive the leader's emotion as (in)appropriate. Individuals have expectations of emotions for specific contexts and assess the extent to which expressed emotions conform to these expectations (Warner & Shields, 2009). Given the contradictory, blended nature of mixed emotions, followers may not expect emotional complexity from leaders and, therefore, may perceive leaders as being too emotional or experiencing too much emotion for the given circumstances. As such, in general, displays of mixed emotions should be viewed as less appropriate than displays of discrete emotions. Thus, the first hypothesis:

Hypothesis 1a: Leader displays of mixed emotions will lead to less favorable inferences regarding the appropriateness of the leader's emotional display compared to displays of single discrete emotions.

Situational certainty. Integrating emotion appraisal theories with follower inferences suggests individuals are likely to respond more favorably to leader mixed emotions during organizational situations characterized by competing demands, contradictory goals, change, and/or uncertainty (Rothman & Melwani, 2017) as mixed emotions better "match" the environment. In uncertain organizational environments, followers are likely to view leader mixed emotions as more appropriate and genuine given the demands of the situation. In uncertain contexts, decisions require deliberation, attention to multiple perspectives, and the consideration of divergent choices. Displays of mixed emotions may signal to followers that leaders are engaging in these cognitive steps, in turn, influencing positive perceptions of display appropriateness. On the other hand, in simple situations, followers are likely to view mixed emotional expressions as inappropriate. In such situations, the decisions that need to be made by leaders should be relatively clear and unambiguous, yet mixed emotions convey the opposite and may imply that a leader is indecisive. Therefore, in more certain situations, followers are likely to make less favorable attributions about their leader's competence given the misalignment between the situation and leader displays of emotion. Thus, the following hypothesis is made:

Hypothesis 1b: Situational uncertainty will moderate the relationship between leader displays of mixed emotions and inferences of display appropriateness, such that in highly complex situations a leader displaying mixed emotions will be perceived as more appropriate than a leader displaying single emotions. In situations of low complexity, a

leader displaying discrete emotions will be perceived as more appropriate than a leader displaying mixed emotions.

Inference characteristics. Leader emotional expressions may not only influence the content of follower inferences, but the processes underlying follower inferences as well. Cognitive appraisal theories of emotion (Lerner & Keltner, 2000; Roseman, 1984; Smith & Ellsworth, 1985) illustrate that emotional experiences influence action and cognitive processing tendencies. For instance, Tiedens and Linton (2001) found that feelings associated with certainty elicit more heuristic information processing, whereas feelings of uncertainty give rise to systematic processing. Additionally, research demonstrates that discrete emotions (e.g., anger, fear, happiness) have different attention-focusing and cognitive processing properties (e.g., Chuang & Lin, 2007; Lerner & Tiedens, 2006; Moons & Mackie, 2007) Drawing from functionalist perspectives (Keltner & Haidt, 1999), which suggests that emotional expressions regulate social behavior, leader emotional expressions are likely to influence the information processing tendencies of followers. In the context of mixed emotional displays, these expressions signal contradictory appraisals about the environment, such as the situation being both certain and uncertain or both pleasant and unpleasant. Observing emotional complexity, an atypical feeling state, signals to followers that a situation is unusual and, as such, may elicit certain cognitive processes in followers, namely a greater consideration of alternative perspectives and more systematic processing of the situation (Rothman et al., 2017). The contradictory, conflicting nature of leader mixed emotional expressions suggests that there are multiple perspectives worthy of consideration and that the situation warrants a thorough, in-depth understanding. Therefore, leader displays of mixed emotions may induce greater cognitive

flexibility and in-depth processing in followers compared to discrete emotions. Thus, the second hypothesis:

> *Hypothesis 2*: Leader displays of mixed emotions will relate to higher levels of (a) cognitive flexibility (e.g., consideration of divergent perspectives) and (b) depth of processing (i.e., thorough, in-depth inferences) in follower responses to emotional displays compared to displays of single discrete emotions.

Follower Motivation and Ability to Understand Mixed Emotions

Importantly, the inferential process following leader displays of mixed emotions is likely to require more intensive information processing given the contradictory appraisals, valence, and/or action tendencies exhibited in these expressions. Compared to simple emotions, extracting information from complex emotions may require more effortful processing on the part of the follower and this might only be accomplished if followers are motivated and capable of processing emotional information. Despite the higher cognitive effort, displays of emotional complexity have the potential to relay critical information about the leader and the task to followers given the broad nature of these emotional experiences (Rothman & Melwani, 2017; Rothman et al., 2017). This suggests that follower's emotional competence and epistemic motivation are critical to comprehending leader emotional complexity.

Follower emotional intelligence. Emotional intelligence, or the ability to recognize, understand, and use emotions (Mayer, Salovey & Caruso, 2008) represents the follower's capacity to accurately appraise leader emotional displays. Individuals high in emotional intelligence have an increased sensitivity to and understanding of emotions expressed by those around them (Wong & Law, 2002). As such, the emotional intelligence of followers should shape how they perceive their leader's emotional expressions, particularly its appropriateness.

Waples and Connelly (2008) found that emotional intelligence moderated the relationship between positive and negative discrete emotions and perceptions of transformational leadership such that followers with higher levels of emotional intelligence perceived positive emotional displays as more transformational. In the context of emotional complexity, followers high in emotional intelligence may view mixed emotional displays as a more advanced emotional state, understand the situational nuances leading to these mixed feelings, and consider these expressions by leaders as appropriate. Consequently, emotional intelligence is likely to moderate follower's perceptions of display appropriateness. Thus, the following hypothesis:

> *Hypothesis 3:* Follower emotional intelligence will moderate the relationship between leader displays of emotion and inferences about display appropriateness such that individuals with higher levels of emotional intelligence will rate leaders displaying mixed emotions as more appropriate.

Follower epistemic motivation. Research on leader displays indicate that characteristics of the follower impact the influence of emotional displays on followers (van Knippenberg & Van Kleef, 2016). Given that emotional displays operate through the cognitive interpretation pathway, the extent to which followers are motivated to process information is critical. Epistemic motivation, or an individual's motivation to achieve an accurate understanding and reach accurate judgments, is, therefore, an important individual difference worthy of consideration. Epistemic motivation is related to a number of trait-level needs, including the need for structure (Kruglanski, 1989) and need for cognition (Cacioppo & Petty, 1982). Importantly, trait differences in epistemic motivation are associated with openness toward divergent perspectives (Kruglanski & Webster, 1991) and greater systematic processing (Nijstad & Kaps, 2008). Van Kleef et al. (2009) found that epistemic motivation moderated the effect of performance

inferences following leader displays of anger on team performance, such that teams with higher levels of epistemic motivation exhibited higher levels of performance through greater processing of task-relevant information. Follower willingness to process information from leader emotion plays an important in leader emotional display and leadership effectiveness relationship given that emotions provide information about the situation, behaviors, intentions, and beliefs (Elfenbein, 2007). Particularly as complex emotional displays convey broad, often contradictory, states, follower epistemic motivation is of significance given the leader- and situation-relevant information provided through these emotions. Followers high in epistemic motivation should exhibit greater cognitive flexibility and information processing from mixed displays of emotion compared to followers low in epistemic motivation given their desire to engage in information search. Thus, the following is hypothesized:

> *Hypothesis 4*: Follower epistemic motivation will moderate the relationship between leader displays of emotion and the characteristics of follower inferences, (a) cognitive flexibility and (b) depth of processing, such that individuals with higher levels of epistemic motivation will produce responses to leader emotional displays that exhibit higher levels of flexibility and greater depth of processing.

Displays of Mixed Emotions and Leadership Effectiveness

The emerging interest in leader emotional displays establishes that emotional expressions relate to several leadership outcomes, including performance (Chi, Chung, & Tsai, 2011; Visser et al., 2013), leader evaluations (Newcombe & Ashkanasy, 2002; Madera & Smith, 2009; Schaumberg & Flynn, 2012), leader trust (Ballinger, Schoorman, Lehman, 2009; Waples & Connelly, 2008), and communication (Venus et al, 2013). The broad scope of leadership effectiveness warrants consideration of multiple outcome variables. Therefore, in order to more

fully capture the influence of leader mixed emotional expressions, the present study assesses evaluations of leader competence, perceptions of communication effectiveness, and follower task performance.

Leader Evaluations

The extent to which followers perceive their leader as capable and competent is influenced by the emotions expressed in leader-follower interactions (Gooty et al., 2010). Research displays a somewhat consistent trend that leaders displaying positive emotions are viewed more favorably than leaders that expressing negative emotions (Bono & Ilies, 2006; Damen et al., 2008; Johnson, 2008; Lewis, 2000). The positive findings for positive emotions and leader evaluations stems from the interpersonal liking sentiments that arise from observing positive emotional expressions (Van Kleef, 2009). Furthermore, studies examining discrete emotional displays find that specific emotions are associated with specific attributes, such as anger with dominance and competence or sadness with weak and submissive (Tiedens, 2001). However, with mixed emotional expressions, leaders are displaying multiple, potentially conflicting, signals about their leadership abilities. Madera and Smith (2009) contend that displays of multiple emotions positively influence leader evaluations because such expressions exhibit the positive attributes associated with the combined emotions. However, displays of mixed emotions may also elicit judgments beyond specific emotion-characteristic inferences. For instance, research suggests that individuals likely perceive others expressing mixed emotions as less decisive, less competent, less impulsive, more complex, and more deliberative (Rothman, 2011; Rothman & Wiesenfeld, 2007). The complexities of inferences regarding emotional complexity indicates that followers may view their leaders less positively when displaying mixed emotions as opposed to discrete emotions.

Communication Effectiveness

Clearly communicating organizational goals is a main responsibility of leaders and emotional expressions influence the degree to which leaders can effectively convey their message (Ashkanasy & Humphrey, 2011). Emotions are intertwined with the message and convey information that influence follower perceptions of the leader's communication skills. Positive emotions, such as excitement and optimism, convey a sense of efficacy, hope, and enjoyment (George, 1996). Negative emotions, such as anger or fear, portray a sense of threat and encourage followers to rally around the leader and organization (Madera & Smith, 2009). Mixed emotional displays, as opposed to discrete emotions, have the potential to reduce the overall coherence of the message communicated by the leader. The purpose of leader communication is to establish a sense of purpose and understanding among organizational members (Carton, Murphy, & Clark, 2014). The conflicting information and varying perspectives communicated via complex emotional displays may obscure the goals and actions expressed by the leader. Mixed emotional expressions can convey both promotion- and prevention-oriented actions and goal congruence and incongruence. Mixed emotions can communicate contradiction and tension (Rothman, 2011) and may present a message that on the surface is relatively unclear or ambiguous. On the other hand, displays of single discrete emotions are more likely to align with the main message being communicated. If the emotion aligns with the purpose and goals conveyed, emotional displays will add, not detract, from follower perceptions of leader communication.

Taken together, follower perceptions of leader effectiveness, namely evaluations of leader competence and perceptions of communication effectiveness, are likely to be negatively

influenced by leader mixed emotional expressions for complex, conflicting impressions provoked by these expressions. Thus, the following hypothesis:

Hypothesis 5: Leader displays of mixed emotions will relate to lower (a) evaluations of leader competence and (b) perceptions of communication effectiveness, whereas displays of single emotion will relate to better evaluations of leader competence and higher ratings of communication effectiveness.

Mediating effects of follower emotion and display appropriateness. Follower emotions can also influence perceptions of leadership effectiveness. Several studies demonstrate that emotions felt by followers following leader emotional displays relate to judgments of leader effectiveness (Damen et al., 2008; Johnson, 2008) and that this transfer of emotion induces attributions that are congruent with the follower's emotional state (Forgas & Bower, 1987). Followers may use their current emotional state as an indication of their feelings toward the leader. As such, followers in positive emotional states often rate their leader as more effective than followers experiencing negative emotions (Eberly & Fong, 2013; Visser et al., 2013) and these emotional states arise from leader emotion contagion effects (Sy et al., 2005). Therefore, leader mixed emotional, in addition to discrete emotional, expressions should influence leader effectiveness perceptions through follower emotional reactions. Thus, the following hypothesis:

Hypothesis 6: Follower emotions will mediate the relationship between leader displays of mixed emotion and (a) evaluations of leader competence and (b) perceptions of leader communication effectiveness.

In addition to follower emotions, follower inferences about the appropriateness of the leader's emotional display should also mediate the relationship between leader emotional expressions and effectiveness perceptions. Melwani et al. (2012) found that perceived

intelligence influenced the relationship between displays of compassion and contempt with emergent leadership. Eberly and Fong (2013) demonstrated that perceived sincerity explained the relationship between leader emotions and leadership effectiveness. Judging a leader's emotional expression as appropriate, or inappropriate, should, therefore, influence follower perceptions of the leader's competence and communication effectiveness. Leaders who express emotions that match the expectations of followers should engender more favorable leader effectiveness ratings because these leaders are acting in ways that conform to the follower's perception of an effective, emotionally appropriate leader. Thus, the following hypothesis is made:

> *Hypothesis 7*: Inferences of leader display appropriateness will mediate the relationship between displays of leader emotional displays and (a) evaluations of leader competence and (b) perceptions of leader communication effectiveness.

Follower Performance

Leaders are not only deemed effective by the ratings they receive from followers, but by their ability to influence follower performance. Leader emotional expressions can motivate followers to exert more effort, convey the importance of the task at hand, and direct followers toward task-relevant information. Connelly and Ruark (2010) discuss that the cognitive effects of emotions, such as information processing and persistence, likely influence the impact that leader emotions have on follower performance Earlier it was posited that mixed emotional expressions should elicit increased cognitive flexibility and depth of processing in followers and these cognitive processes, in turn, are believed to facilitate follower performance. The consideration of alternative, divergent perspectives provides individuals with a broader understanding of the environment. Fong (2006) and Rees et al. (2013) found that emotional complexity enhanced performance through greater consideration of alternative relationships as attending to broader

perspectives improved follower's awareness of elements contributing to effective performance. Studies also demonstrate that emotional expressions influence information processing and processing effort (Miron-Spektor, Efrat-Treister, Rafaeli, & Schwarz-Cohen, 2011; Sy et al., 2005; Tiedens & Linton, 2001). Therefore, the extent to which leader emotions elicit in-depth cognitive processing of the task should also contribute to performance levels. As such, it is posited that the impact of leader mixed emotional, as well as discrete emotional, expressions on follower performance is through follower cognitive processes elicited by leader emotion. Thus, our final hypothesis:

> *Hypothesis 8*: Characteristics of follower inferences following leader emotional displays, namely cognitive flexibility and depth of processing, will mediate the relationship between leader displays of mixed emotions and follower performance.

Method

Sample

Two hundred and sixty-six undergraduate students from a large, public university volunteered to participate in the present study. Participants were recruited using a university-based online research study website where a description of the study was provided. Participants received course credit for their participation. On average, participants were 18.60 years old (*SD* = 1.28) and had 2.42 years of work experience (*SD* = 1.62). Of these participants, 75% (*n* = 199) were female and 25% (*n* = 67) were male. Eleven percent (*n* = 31) of the participants had no working experience, but of those reporting work experience approximately 70% (*n* = 186) had more than one year of experience.

Design and Procedures

A 5 (leader emotional display of negative mixed emotions, mixed valence emotions, positive mixed emotions, anger, or pride) by 2 (high uncertainty or low uncertainty) between-subjects was employed to investigate the proposed hypotheses. Participants were randomly assigned to one of the 10 study conditions. The study was conducted during a single session and took approximately 1 hour and 30 minutes to complete. After completing the informed consent form, participants first completed a battery of covariate measures. Next, participants were tasked with taking on the role of a marketing research analyst at a hypothetical organization, INNOtech, and were provided information about their position in the company, a description of the organization's history, and information regarding a new artificial intelligence software being developed by the company named *Portal* (see Appendix A). Experimental materials for the present effort were adapted from Waples and Connelly (2008).

After becoming familiar with their role and the organization, participants read that they were taking part in INNOtech's two-day strategic planning retreat and that the CEO would be meeting with key teams in each division to discuss the plans for releasing their new technology, *Portal*. Participants were then provided a written leader speech which contained the studies main manipulations (see Appendix B). The content of the speech was identical across conditions expect for the manipulated information concerning the leader's emotion and situational certainty. Immediately following the leader's speech, participants were asked to write about their reactions to what the CEO said and describe their thoughts regarding the situation facing the company. Following their reactions, participants were asked to formulate a plan for marketing and advertising the artificial intelligence technology. Participants were instructed to describe a detailed plan for marketing this product, discuss what they would need from the Research and

Development Division to help the success of their plan, and explain how they would justify their plan to senior management. Following the development of the marketing plan, participants completed a leader evaluation measure and a measure assessing their perceptions of the leader's communication effectiveness. Next, participants completed a manipulation check for the leader emotional display and uncertainty manipulations. Finally, participants completed a second set of covariate measures and a demographics form. All participants were debriefed at the end of the study session.

Independent Variables

Leader emotion manipulation. The leader emotional display manipulation was embedded into the leader's speech that was presented to participants. The leader's speech was adapted from a prior study examining leader emotional displays in vision implementation (Waples & Connelly, 2008) and the emotion manipulation included both verbal emotional statements and descriptions of non-verbal emotional displays being portrayed by the leader. Emotions selected for the present effort were identified from Connelly, Gaddis, and Helton-Fauth's (2002) emotion framework which is based on cognitive appraisal theories of emotion (e.g., Frijda, 1986) and outlines the role of discrete emotions in leadership. During the speech, the CEO displayed mixed valence emotions, negative mixed emotions, positive mixed emotions, anger, or pride. In the mixed valence condition, the leader expressed feelings of *anger* and *pride*. The leader in this condition initially expressed out-ward feelings of anger toward their competitors but transitioned to feelings of pride as he (the leader was male) discussed how pleased he was with the success and efforts of the employees. In the negative mixed condition, the leader expressed feelings of *anger* and *fear*. In this condition, the leader expressed out-ward feelings of anger toward their competitors at the beginning of the speech but shifted to

expressions of fear after discussing the potential consequences of an unsuccessful product release. In the positive mixed condition, the leader expressed feelings of *pride* and *interest* and talked about how pleased he was with the efforts of the employees before shifting to expressions of curiosity and passion toward INNOtech's future directions. In the anger condition, the leader exhibited out-ward expressions of anger and was described as having an angry tone in his voice. In the pride condition, the leader expressed feelings of pride toward the employees and company and was described as standing tall with his head held high. The descriptions for emotions appearing across conditions, *anger* and *pride*, were kept consistent to reduce potential confounds. Appendix B presents examples of the leader emotion manipulation.

Situational uncertainty manipulation. The situational uncertainty manipulation, which was presented at the beginning of the leader's speech, involved manipulating the certainty of the environment surrounding INNOtech, including the direction of the company, knowledge of potential market competitors, and the certainty surrounding the product's potential success. In the high uncertainty condition, participants were informed by the leader that *Portal* is "very different from our current products developed at INNOtech, which creates uncertainty for the company" and that "we at INNOtech are embarking on a journey into the unknown…we are not sure how many other companies are attempting this same feat" and that "as we venture into a new area of technology, we must recognize the inherent uncertainty in this mission". In the low uncertainty condition, the leader informed participants that *Portal* is a "natural progression from our current products, which creates a clear path for the company" and that "even though we are expanding into a new technology market, we know what we are getting into as a company. We know who our competitors are in this sector as well as the companies we do not need to worry

about. There should be few surprises down this road". Examples can be found in speeches presented in Appendix B.

Epistemic motivation. Follower epistemic motivation, which reflects an individual's motivation to achieve a thorough understanding of the world (De Dreu et al., 2008), was assessed using the 11-item personal need for structure scale developed by Neuberg and Newsom (1993). Example items for this scale include "I don't like situations that are uncertain", "I become uncomfortable when the rules in a situation are not clear", and "I enjoy the exhilaration of being in unpredictable situations". Participants rated the extent to which they agreed with each statement on a 5-point Likert scale (1 = *strongly disagree,* 5 = *strongly agree*) and the measure was scored such that with high scores indicate higher levels of epistemic motivation, or a stronger tendency to search for new information when forming judgments. Validity evidence for this measure as an assessment of epistemic motivation is provided by Moskowitz (1993), Neuberg and Newsom (1993), and Van Kleef et al. (2009, 2010). Cronbach's alpha was .80.

Emotional intelligence. The emotional competence of participants was assessed with the 18-item Situational Test for Emotion Management-Brief (STEM-B) developed by McCann and Roberts (2008) and Allen et al. (2015). The STEM-B is a multiple-choice situational judgement test (SJT) that assesses emotion management capabilities based on ability-models of emotional intelligence (e.g., Mayer & Salovey, 1997). The test presents participants with 18 short scenarios requiring emotion regulation and requires individuals to select the most effective response. Correct items were scored based on expert ratings (McCann & Roberts, 2008). Validity evidence for the STEM-B is provided by Allen et al. (2015). The split-half reliability was .59 and cronbach's alpha was .57.

Dependent Variables

Open-ended responses following the CEO's speech and the participant's marketing plan for INNOtech's new product, *Portal*, were coded by three doctoral students in industrial organizational psychology blind to the study's purpose and conditions. Frame of reference training (Bernardin & Buckley, 1981) was conducted with all raters prior to beginning the rating process. Raters were provided the operational definitions of each construct, familiarized with the ratings scales, and provided behaviorally-anchored benchmark scales for each variable. In order to develop a common frame-of-reference raters were provided a set of sample responses for practice ratings. After initial consensus was reached, raters were provided the full set of responses and independently coded participant responses. During the coding process, meetings were occasionally held to avoid rater drift and discuss any discrepancies. Interrater agreement estimates were calculated using the r_{wg}^{*} index (James, Demaree, & Wolf, 1993; LeBreton & Senter, 2008). Descriptions and reliabilities of the constructs that were rated are presented in the descriptions below.

Follower emotional reactions. Follower positive and negative affective reactions were based on the participant's open-ended response following the leader's speech. Positive affect was defined as the extent to which the participant's response has a positive emotional tone which is characterized by feelings of enthusiasm, alertness, and pleasurable engagement (Watson, Clark, Tellegen, 1988). Ratings of positive affective reactions were made using a 5-point Likert scale (1 = *lack of positive tone*; 5 = *highly positive* tone). Interrater agreement (r_{wg}^{*}) was .70. Negative affect was defined as the extent to which the participant's responses has a negative emotional tone which is characterized by feelings of distress and unpleasurable engagement, including anger, contempt, fear, etc. (Watson et al., 1988). Ratings for negative affective reactions were

made using a 5-point Likert scale (1 = *lack of negative tone*; 5 = *highly negative tone*) and interrater agreement (r_{wg}^{*}) was .72.

Display appropriateness of leader emotional displays. Follower perceptions regarding the appropriateness of the leader's emotional display were based on the participant's reaction to the leader's speech. Display appropriateness was defined as the extent to which the participant believes the emotions expressed by the leader are appropriate for the present situation and ratings for this variable were made on a 5-point Likert scale (1 = *very inappropriate*, 5 = *very appropriate*). Given the open-ended nature of the reaction response, spontaneous attributions about the appropriateness of the leader's emotional display were assessed rather than "forced" ratings about the leader's emotional appropriateness. Similar methods were utilized by Eberly and Fong (2013) regarding spontaneous attributions about leader (in)sincere intentions. Ratings for display appropriateness were based on the ratings of two industrial organizational psychology doctoral students and the interrater agreement (r_{wg}^{*}) between the two raters was .80.

Follower cognitive flexibility and depth of processing. Ratings for the characteristics of follower inferences were based on participant responses to the leader's speech. Follower cognitive flexibility was defined as the extent to which the participant considered divergent perspectives and a broad scope of information when reacting to the leader's speech. Ratings were made on a 5-point Likert scale (1 = *little to no flexibility*; 5 = *high flexibility*) and the interrater agreement (r_{wg}^{*}) was .73. Follower depth of processing was defined as the extent to which the participant's response to the leader's speech was thorough, detailed, in-depth, and insightful. Ratings were made on a 5-point scale (1 = *little to no depth*; 5 = *excellent depth*) and interrater agreement (r_{wg}^{*}) was .78.

Leader competence. Follower evaluations of the leader's competence was assessed using a 7-item scale that has been used in past studies on leadership (e.g., Madera & Smith, 2009; Tiedens, 2004). This measure represents a global evaluation of the leader and consists of items assessing perceived competence and legitimacy. Example items include "I would want him to continue to be CEO of the company", "The CEO is a knowledgeable leader", "The CEO has a clear direction for the company", and "I approve of the CEO as a leader" and ratings were made on a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Validity evidence for this measure as an assessment of leader evaluation is provided by Madera and Smith (2009). Cronbach's alpha was .93.

Leader communication effectiveness. Perceptions of leader communication effectiveness was assessed using the 7-item general appropriateness scale of the communicator competence measure developed by Canary and Spitzberg (1987). Items from this scale were adapted to the present context to assess the extent to which participants perceived the leader's speech as useful and appropriate. Example items include "I understood the information communicated by the CEO", "The CEO said several things that seemed out of place in the conversation (reverse-scored)", "The CEO's speech was very suitable to the situation" and items were rated on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). Cronbach's alpha was .82.

Follower task performance. Performance on the marketing plan was assessed through ratings of the participant's final plan. The marketing plans developed by participants were rated on three variables, quality, originality, and elegance. Ratings for each of these variables was made on a 5-point Likert scale. Quality was defined as the extent to which the plan was realistic, practical, and appropriate for the situation (1 = *poor quality*, 5 = *excellent quality*). Originality

was defined as the extent to which the plan was novel and original (1 = *poor originality*, 5 = *excellent originality*). Elegance was defined as the extent to which the plan was articulated in a concise manner (1 = *little to no elegance*, 5 = *very elegant*). Interrater agreement (r_{wg}^{*}) for quality, originality, and elegance were .76, .70, .72, respectively. Given the large correlations between these variables (r = .76 - .89), these dimensions were aggregated to create an overall performance index. Interrater agreement (r_{wg}^{*}) was .73.

Covariate Measures

Following best practice recommendations for control measures in research (Becker et al., 2016; Bernerth & Aguinis, 2016), the inclusion of covariate measures for the present effort was based on a theoretical rationale, an established empirical relationship between the control variable and variables of interest in this study, and the covariates meeting an acceptable standard of reliability. Descriptions of covariate measures are presented below.

Trait positive and negative affect. Damen, van Knippenberg, and van Knippenberg (2008) found that the affective match between follower trait positive affect and leader emotional displays influences leadership effectiveness outcomes. Therefore, participant's tendency to feel positive and negative emotions was assessed through the 20-item positive and negative affect schedule (PANAS; Watson & Clark, 1988) which asked participants to report the extent to which they have felt different emotions over the past few weeks. The PANAS measure includes ten items assessing positive emotions (e.g., interested, excited, proud, determined) and 10-items assessing negative emotions (e.g., distressed, upset, guilty, irritable) along a 5-point Likert scale (1 = *very slightly or not at all*; 5 = *extremely*). Cronbach's alpha was .84 for positive affect and .81 for negative affect.

Agreeableness. Agreeableness reflects the tendency to be courteous, good-natured, cooperative, and maintain social harmony (Barrick & Mount, 1991). Van Kleef, Homan, Beersma, and van Knippenberg (2010) found that the effect of leader anger and happiness on leadership outcomes depends on followers' level of agreeableness. Agreeableness was assessed using the 9-item agreeableness scale from the big five inventory (John, Donahue, & Kentle, 1991; John & Srivastava, 1999). Participants were asked to rate the extent to which the agreed/disagreed that the statement and items were rated on a 5-point Likert scale (1 = *disagree strongly*, 5 = *agree strongly*). Example items include "Is helpful and unselfish with others", "Has a forgiving nature", and "Is considerate and kind to almost everyone". Cronbach's alpha was .77.

ACT. Given the cognitive demands of the marketing task, self-reported ACT scores were collected from participants as an assessment of intelligence. Cole and Gonyea (2010) found a large correlation between self-reported and actual ACT/SAT test scores and research demonstrates that ACT scores Koenig, Frey, & Detterman, 2008) and SAT scores (Frey & Detterman, 2004) can be considered measures of general intelligence given their large correlations with conventional intelligence tests. In instances where participants report SAT scores, but not ACT scores, SAT were converted to the ACT metric (The College Board, 2018). Sixteen participants did not report ACT scores.

Demographics. Age, gender, and work experience were all measured due to their potential relationship with perceptions of leadership effectiveness and their ability to influence task performance.

Results

Descriptive statistics, correlations, and reliabilities can be found in Tables 1. Descriptive statistics by condition are presented in Tables 2 and 3. Correlations among study variables

suggest that trait affect, follower emotional reactions, and agreeableness positively relate to follower evaluations of the leader and perceptions of leader communication. Additionally, leader evaluations correlate strongly with perceptions of leader communication. Follower cognitive flexibility and depth of processing correlate positively with task performance. Furthermore, neither leader evaluations nor perceptions of leader communication effectiveness correlated with follower task performance suggesting that attitudinal leadership outcomes may be independent of performance outcomes.

Hypothesis testing was conducted using a series of multivariate analysis of covariance (MANCOVA), analysis of covariance (ANCOVA), hierarchical regression, and mediation analyses. Initial MANCOVA and ANOVA analyses included all of the covariate measures described above and follow-up analyses were conducted with only significant covariates. Analyses with only significant covariates produced equal results with the analyses including the full set of control variables. Therefore, significant covariates were retained for their respective analysis and are described below. The detection of significant mean differences was followed up using planned comparisons assessing mixed emotion conditions and discrete conditions as well as pairwise comparisons using Bonferroni correction for multiple comparisons. Mediational hypothesis (Hypotheses 6-8) were conducted using the PROCESS SPSS macro provided by Hayes (2017) including bootstrapping procedures with 5000 resamples. Since the independent variable (i.e., leader emotional display) was multicategorical, k -1 dummy coded variables were created for the analysis in order to fully represent the effect of leader emotional displays. The anger condition, pride condition, negative mixed condition, and positive mixed condition served as a reference group in separate analysis to provide all relative indirect effect estimates. The indirect effect estimates presented in Tables 10-14 represent relative indirect effects as the effect

is dependent on the coding of the independent variable (Hayes & Preacher, 2014). Significant mediational effects occurred when the indirect effect's 95 percent confidence interval ($CI_{.95}$) did not include zero.

Manipulation Checks

Leader emotional display. Following the experimental task, participants were asked to rate the extent to which the leader displayed a given emotion using 5-point Likert scale (1 = *very slightly or not at all*, 5 = *extremely*). Analysis of variance (ANOVA) results found significant differences in ratings of leader positive affect, $F(4, 261) = 35.02$, $p < .001$. Post-hoc comparisons with Bonferroni corrections demonstrate that participants in the negative mixed condition (M = 3.06, SD = 0.67), the mixed valence condition (M = 3.24, SD = .76), and the anger condition (M = 3.00, SD = 0.62) reported lower levels of leader positive affect than the positive mixed condition (M = 4.08, SD = 0.57) and pride condition (M = 4.03, SD = 0.64), respectively. ANOVA results also demonstrate significant mean differences in ratings of leader negative affect across conditions, $F(4,261) = 38.83$, $p <.001$. Pairwise comparisons show that those in the negative mixed condition (M = 2.94, SD = 0.70) reported significantly higher levels of leader negative affect compared to all other groups. Additionally, the mixed valence condition reported higher levels of leader negative affect (M = 2.43, SD = 0.66) than the positive mixed condition (M = 1.76, SD = 0.60) and pride condition (M = 1.69, SD = 0.59), but did not differ in reported negative affect from the anger condition (M = 2.62, SD = 0.65).

Also, paired samples t-tests were used to assess whether participants within a given leader emotion condition were perceiving manipulated emotions more than other possible emotions. This manipulation check revealed that ratings within the different leader emotional display conditions were higher for the manipulated emotions than for non-manipulated emotions.

Results showed that participants in negative mixed condition perceived higher levels of anger and fear than non-manipulated emotions (i.e., pride, interest, happy, guilty, sad), $t(54) = 7.69$, $p < .001$. Participants in the mixed valence condition perceived higher levels of anger and pride than non-manipulated emotions (i.e., fear, interest, happy, guilty, sad), $t(51) = 12.80$, $p < .001$. Participants in the positive mixed condition perceived higher levels of pride and interest than non-manipulated emotions (i.e., anger, fear, happy, guilty, sad), $t(51) = 26.80$, $p < .001$. Participants in the anger condition perceived higher levels of anger than non-manipulated emotions (i.e., pride, interest, fear, happy, guilty, sad), $t(53) = 13.75$, $p < .001$. Finally, participants in the pride condition perceived higher levels of pride than non-manipulated emotions (e.g., anger, interest, fear, happy, guilty, sad), $t(52) = 26.36$, $p < .001$. Together, these checks provide evidence for the success of the leader emotional display manipulation.

Situational uncertainty. The situational uncertainty manipulation, which was presented in the leader's speech, involved manipulating the certainty of the environment surrounding INNOtech (e.g., the direction of the company and potential competitors) and the certainty surrounding the product's success. To assess this manipulation, ratings of perceived feelings in the leader's speech were assessed. We assessed the extent to which participants perceived emotions and feelings reflecting uncertainty in the leader's speech, namely anxiety and nervousness. Anxiety is defined as a distressful state that arises in reaction to novel situations with the potential for poor outcomes (Brooks & Schweitzer, 2011) and is characterized by feelings of low certainty and control (Frijda, Kuipers, & ter Schure, 1989). Prior literature includes nervousness under the emotion of anxiety (Gray, 1991) and indicates that this feeling also reflects an appraisal of uncertainty. Therefore, ratings of anxiety and nervousness were combined to form an uncertainty perception score. T-test results, $t(264) = 2.15$, $p = .032$,

demonstrate that those in the high uncertainty condition reported higher levels of uncertainty (*M* = 3.10, *SD* = 1.20) than those in the low uncertainty condition (M = 2.77, *SD* = 1.26). This result provides evidence for the success of the uncertainty manipulation.

Hypothesis Testing

To test the research question concerning follower emotional reactions, a multivariate analysis of covariance (MANCOVA) was conducted examining the influence of leader emotional displays on follower positive and negative emotional reactions controlling for trait positive affect and ACT scores. MANCOVA results suggest a statistically significant effect for leader emotional displays on positive and negative reactions, $F(8, 474) = 5.48$, Wilk's = 0.85, $p < .001$, partial $\eta^2 = .09$. Follow-up univariate analysis of covariance (ANCOVA) tests, presented in Table 4, reveal significant main effects for leader emotional displays on follower positive affective reactions, $F(4, 238) = 8.87$, $p < .001$, partial $\eta^2 = .13$, and follower negative affective reactions, $F(4, 255) = 9.72$, $p < .001$, partial $\eta^2 = .13$.

Pairwise comparisons using Bonferroni corrections found significant differences in positive reactions across conditions. Participants in the mixed valence condition (*M* = 2.53, *SD* = 0.94), negative mixed condition (*M* = 2.48, *SD* = .96), and anger condition (*M* = 2.27, *SD* = .98) had significantly less positive emotional responses than the mixed positive condition (*M* = 3.15, *SD* = 1.08) and pride condition (*M* = 3.22, *SD* = 1.10), respectively. Similarly, pairwise comparisons found that participants in the negative mixed condition (*M* = 2.50, *SD* = 1.02), mixed valence condition (*M* = 2.40, *SD* = 0.97), and anger condition (*M* = 2.56, *SD* = 1.06) had significantly higher negative affective reactions than the positive mixed condition (*M* = 1.66, *SD* = 0.88) and pride condition (*M* = 1.86, *SD* = 0.94).

Hypothesis 1a predicted that leader displays of mixed emotions would be rated as less appropriate than displays of single emotions. An analysis of covariance (ANOVA) test found a significant difference in display appropriateness across leader emotional display conditions controlling for ACT scores, $F(4, 212) = 3.36$, $p = .011$, partial $\eta^2 = .06$. Planned comparisons comparing mixed emotion conditions to discrete emotion conditions did not find significant differences in ratings of display appropriateness, $t(182.23) = -0.01$, $p = .99$. Pairwise comparisons suggest that leaders displaying anger had lower ratings of display appropriateness ($M = 3.24$, $SD = 1.36$) than leaders displaying pride ($M = 3.94$, $SD = 1.06$) and positive mixed ($M = 3.99$, $SD = 1.14$). Ratings of display appropriateness by participants in the negative mixed ($M = 3.38$, $SD = 1.21$) and mixed valence ($M = 3.40$, $SD = 1.17$) conditions did not differ from the positive mixed, anger, or pride conditions. Therefore, Hypothesis 1a was not supported as participants did not perceive displays of mixed emotions as less appropriate than displays of discrete emotions. Ratings of emotional display appropriateness appear to be more a function of leader emotion valence.

Hypothesis 1b predicted that situational uncertainty would interact with leader emotional display in influencing participant perceptions of leader emotional display appropriateness. Results from the ANCOVA (see Table 5) analysis suggest that leader emotional display and situational uncertainty do not interact in influencing perceptions of display appropriateness, $F(4, 212) = 0.79$, $p = .53$, providing no support for Hypothesis 1b**.**

Hypothesis 2a predicted that leader displays of mixed emotions will lead to higher levels of cognitive flexibility and depth of processing in followers. A MANCOVA for follower cognitive flexibility and depth of processing showed a significant effect for leader emotional displays, $F(8, 510) = 2.31$, Wilks = .93, $p = .020$, partial $\eta^2 = .04$. Follow-up univariate

ANCOVAs were conducted for follower cognitive flexibility and depth of processing. No main effect was found for leader emotional displays on cognitive flexibility, $F(4, 256) = 1.32$, $p = .264$. Therefore, Hypothesis 2a was not supported.

There was a significant effect for leader emotional displays on follower depth of processing, $F(4, 256) = 4.10$, $p = .003$, partial $\eta^2 = .06$. Pairwise comparisons with Bonferroni corrections found that participants in the negative mixed condition exhibited higher depth of processing ($M = 3.16$, $SD = 0.84$) than the mixed valence condition ($M = 2.70$, $SD = 0.84$) and positive mixed condition ($M = 2.54$, $SD = 1.01$), and the anger condition ($M = 2.79$, $SD = 0.85$), but not the pride condition ($M = 2.96$, $SD = 0.72$). Additionally, participants in the pride condition exhibited higher depth of processing than the positive mixed condition. Therefore, partial support was found for Hypothesis 2b (see Table 6).

Hypothesis 3 predicted that leader emotions and follower emotional intelligence would interact in influencing follower perceptions of display appropriateness such that participants with higher levels of emotional intelligence would perceive their leaders as more appropriate following displays of mixed emotions. Moderated regression analyses with a multicategorical independent variable were conducted to test these hypotheses (see Table 7). Four dummy coded variables ($k - 1$) with pride as the referent group were created for this analysis as well as mean centering emotional intelligence. The first step of the moderated regression involved assessing the conditional effects of the dummy coded variables and emotional intelligence. The second step involved entering the interaction terms into the regression model. Results from this analysis provide no support for Hypothesis 3 as leader emotional display conditions did not significantly interact with follower emotional intelligence in influencing perceptions of display appropriateness and the model with interaction terms did not explain significant incremental

variance above the first model. Significant conditional effects were found for negative mixed, β = -.18, p = .021, mixed valence, β = -.18, p = .024, and anger conditions, β = -.23, p = .004, in predicting display appropriateness.

Hypothesis 4a and 4b predicated that leader emotional display and follower epistemic motivation would interact in influencing follower inference characteristics of flexibility and depth such that participants with higher levels of epistemic motivation would make inferences of greater flexibility and depth following leader displays of mixed emotions. Moderated regression analyses (see Table 8) with a multicategorical independent variable was conducted for this analysis. Follower epistemic motivation was mean centered. The first step of the moderated regression involved assessing the conditional effects of the dummy coded variables and epistemic motivation. The second step involved entering the interaction terms into the regression model. Interaction terms were computed between leader emotional display conditions and the epistemic motivation. Results provide no support for Hypothesis 4a as the interaction between leader emotional display and epistemic motivation in predicting follower flexibility was not significant. For Hypothesis 4b, the steps were tested for depth of processing. A significant conditional effect for the positive mixed condition was found, β = -.19, p = .013, such that the positive mixed condition resulted in lower levels of depth compared to the pride condition. However, no support for Hypothesis 4b was found as the regression model with interaction terms did not account for significant incremental variance.

Hypothesis 5a and 5b posited a main effect for leader emotional displays on follower evaluations of the leader competence and follower perceptions of leader communication and that mixed emotional displays would relate to lower evaluations and perceptions of communication. A main effect for leader emotional display on leader evaluations was found for both leader

evaluations, $F(4, 238) = 4.20$, $p = .003$, partial $\eta^2 = .07$, and perceptions of leader communication effectiveness, $F(4, 235) = 3.07$, $p = .017$, partial $\eta^2 = .05$. Results are presented in Table 9. Planned comparisons show no significant difference across mixed emotion conditions and discrete emotion conditions for leader evaluations, $t(214.75) = -0.08$, $p = .940$, and perceptions of leader communication, $t(199.924) = 0.25$, $p = .592$. Therefore, Hypothesis 5a and 5b were not supported as leaders displaying mixed emotions were not rated lower on evaluations and communication. Pairwise comparisons with Bonferroni corrections show that leaders displaying pride ($M = 4.17$, $SD = 0.68$) and positive mixed emotions ($M = 4.16$, $SD = 0.60$) were evaluated as more competent than leaders displaying anger ($M = 3.75$, $SD = 0.74$), respectively. No other differences were found. Pairwise comparisons for perceptions of leader communication uncovered a similar finding as leader's display pride ($M = 3.75$, $SD = 0.73$) and positive mixed emotions ($M = 3.77$, $SD = 0.55$) were perceived as being more effective communicators than leaders displaying anger ($M = 3.36$, $SD = 0.73$), respectively.

Hypothesis 6 states that follower emotional reactions will mediate the relationship between leader emotional displays and (a) leader evaluations and (b) perceptions of communication effectiveness. Hypothesis 6a was tested using a multiple mediator model with leader evaluations as the outcome and positive and negative affective reactions serving as the mediators. Several partial mediation results were found for positive emotional reactions and negative emotional reactions. First, in contrast to the anger condition, positive mixed emotions ($CI_{.95} = .11, .35$; $CI_{.95} = .04, .27$) and pride ($CI_{.95} = .12, .37$; $CI_{.95} = .03, .22$) had a positive effect on ratings of leader competence by increasing follower positive affect and decreasing negative affect, respectively. Second, in comparison to pride, negative mixed emotions ($CI_{.95} = -.31, -.08$; $CI_{.95} = -.21, -.03$) and mixed valence emotions ($CI_{.95} = -.29, -.06$; $CI_{.95} = -.18, -.02$) had a

negative effect on ratings of leader competence through reduced feelings of positive affect and higher levels of negative affect , respectively. Thirdly, in comparison to negative mixed emotions, positive mixed emotions ($CI_{.95}$ = .07, .28; $CI_{.95}$ = .04, .25) had a positive effect on ratings of leader competence by increasing participant positive affect and decreasing negative affect, respectively. Finally, compared to positive mixed emotions, mixed valence emotions ($CI_{.95}$ = -.28, -.07; $CI_{.95}$ = -.23, -.03) had a negative effect on ratings of leader competence through increased positive affect and decreased negative affect, respectively. Taken together, these results provide support for Hypothesis 6a

Hypothesis 6b was tested with a multiple mediator model with leader communication effectiveness as the outcome and positive affective and negative affective reactions as the mediators. Again, several partial mediation results were found and a similar pattern of findings emerged. Specifically, in contrast to anger, positive mixed emotions ($CI_{.95}$ = .07, .26; $CI_{.95}$ = .07, .30) and pride ($CI_{.95}$ = .08, .27; $CI_{.95}$ = .04, .25) had a positive effect on perceptions of leader communication through increased levels of positive affect and decreased negative affect, respectively. Second, compared to pride, negative mixed emotions ($CI_{.95}$ = -.23, -.05; $CI_{.95}$ = -.22, -.04) and mixed valence emotions ($CI_{.95}$ = -.22, -.04; $CI_{.95}$ = -.20, -.03) had a negative effect on perceptions of leader communication through decreased levels of positive affect and higher levels of negative affect. Third, in contrast to negative mixed emotions, positive mixed emotions ($CI_{.95}$ = .04, .22; $CI_{.95}$ = .06, .27) had a positive effect on perceptions of leader communication by increasing participant positive affect and decreasing negative affect, respectively. Finally, compared to positive mixed emotions, mixed valence emotions ($CI_{.95}$ = -.20, -.03; $CI_{.95}$ = -.24, -.05) had a negative effect on perceptions of leader communication through decreased positive

affect and increased negative affect, respectively. These patterns of findings provide support for Hypothesis 6b.

Hypothesis 7a posited that follower inferences of emotional display appropriateness would mediate the relationship between leader emotional displays and evaluations of leader competence and perceptions of leader communication effectiveness. To test Hypothesis 7a, a single mediator model was conducted with display appropriateness as the mediator and leader competence as the outcome. Significant mediational effects were found for display appropriateness. Namely, in comparison to anger, positive mixed emotions ($CI_{.95}$ = .08, .49) and pride ($CI_{.95}$ = .08, .46) had positive effects on ratings of leader competence through higher ratings emotional display appropriateness. In comparison to pride, negative mixed emotions ($CI_{.95}$ = -.40, -.04) and mixed valence emotions ($CI_{.95}$ = -.39, -.04) had a negative effect on ratings of leader competence through decreased levels of display appropriateness. In contrast to negative mixed emotions, positive mixed emotions ($CI_{.95}$ = .04, .44) had a positive effect on leader evaluations through increased perceptions of display appropriateness. Finally, compared to positive mixed emotions, mixed valence emotions ($CI_{.95}$ = -.42, -.04) had a negative effect on ratings of leader competence through lower ratings of display appropriateness. Therefore, support was found for Hypothesis 7a.

Hypothesis 7b postulated that inferences regarding emotional display appropriateness would also mediate the relationship between emotional displays and perceptions of leader communication. Similar to Hypothesis 7a, a single mediator model was used to test this hypothesis and several mediation effects were found. In comparison to anger, positive mixed emotions ($CI_{.95}$ = .07, .43) and pride ($CI_{.95}$ = .07, .40) had positive effects on perceptions of leader communication through higher ratings of emotional display appropriateness. In

comparison to pride, negative mixed emotions ($CI_{.95}$ = -.33, -.04) and mixed valence emotions ($CI_{.95}$ = -.32, -.04) had a negative effect on perceptions of leader communication through decreased levels of display appropriateness. In contrast to negative mixed emotions, positive mixed emotions ($CI_{.95}$ = .04, .37) had a positive effect on perceptions of leader communication through increased perceptions of display appropriateness. Finally, compared to positive mixed emotions, mixed valence emotions ($CI_{.95}$ = -.36, -.04) had a negative effect on perceptions of leader communication through lower ratings of display appropriateness. Therefore, support was found for Hypothesis 7b.

An ANCOVA was conducted to assess the main effects and interactive effects of leader emotional displays and situational uncertainty on follower performance on the marketing task. No significant effects were found for leader emotional displays, $F(4, 250) = 2.05$, $p = .088$, or situational uncertainty, $F(1, 238) = 0.73$, $p = .395$. on task performance.

Hypothesis 8 predicted that the characteristics of follower inferences, follower cognitive flexibility and depth of processing, would mediate the relationship between leader emotional displays and follower task performance. To test the Hypothesis 8, a multiple mediator model was used to simultaneously assess flexibility and depth as mediators. No significant indirect effects were found for flexibility, but significant mediational effects were found for follower depth of processing. In comparison to anger, negative mixed emotions ($CI_{.95}$ = .01, .25) had a positive effect on follower task performance through increased depth of processing following the leader's emotional display. In comparison to pride, positive mixed emotions ($CI_{.95}$ = -.27, -.02) had negative effect on follower task performance through decreased depth of processing. Finally, compared to negative mixed emotions, mixed valence emotions ($CI_{.95}$ = -.29, -.03) and positive mixed emotions ($CI_{.95}$ = -.36, -.06) had a negative effect on follower task performance through

decreased depth of processing. Taken together, partial support is found for Hypothesis 8 as depth of processing displayed significant mediational effects between leader emotional displays and task performance.

Discussion

Leader emotional expressions are commonplace in leader-follower interactions. The present study contributes to the literature on the interpersonal effects of leader emotion by extending our notion of leader emotions to mixed emotional expressions. While few differences were found between mixed emotion and single emotion displays, the findings from this study lead to several conclusions. First, leader emotions tend to engender similar emotional states in followers supporting research on the emotional contagion process between leaders and followers (e.g., Johnson, 2008, 2009). Mixed emotional expressions result in followers feeling similar emotions. Namely, negative mixed emotional expressions and positive mixed emotions resulted in roughly similar emotional reactions compared to anger and pride, respectively. Interestingly, mixed valence expressions elicited more negative affective reactions than positive, speaking to the idea that negative emotions have larger effects than positive ones (Baumesiter, Bratslavsky, Finkenauer, & Vohs, 2001). Second, followers appear to make spontaneous attributions about the appropriateness of leader emotion displays and that leader expressions of either single or mixed positive emotions are viewed as more appropriate than expressions of negative emotions. This finding follows similar results for other leader-based attributions (i.e., sincerity, Eberly & Fong, 2013).

Third, this study did find partial evidence for differences in follower information processing after emotional displays. While no differences in follower cognitive flexibility were evidenced across leader emotion conditions, findings demonstrate that leader displays of

negative mixed emotions (i.e., anger and fear) contributed to greater follower depth of processing. Appraisals and information processing styles differ between anger and fear (Angie, Connelly, Waples & Kligyte, 2011). It appears the combination of these two emotions elicits more in-depth cognitive processing, likely due to the high arousal of both emotions, but conflicting cognitive appraisals (e.g., uncertainty). Additionally, pride expressions, as opposed to positive mixed emotions (i.e., pride and interest), resulted in greater follower depth of processing suggesting that the presence of lower arousal positive emotions (i.e., interest) in a mixed emotion display may lead to lower cognitive effort.

Fourth, situational uncertainty and follower attributes, namely epistemic motivation and emotional intelligence, did not contribute to cognitive inferences. Prior work suggests that certain boundary conditions (e.g., task type, Visser et al., 2013; competing demands, Rothman & Melwani, 2017) influence the impact of leader emotional displays. However, in this study situational uncertainty did not demonstrate any effects in shaping follower perceptions of mixed emotional expressions. Contextual factors, such as uncertainty or complexity, are likely to shape follower perceptions, but in certain settings leader emotions may override situational features given the salience of these emotional expressions. Additionally, neither follower epistemic motivation nor emotional intelligence contributed to leader perceptions and follower inferences even though past empirical research has found both epistemic motivation (Van Kleef, Anastasopoulou, & Nijstad, 2010; Van Kleef et al., 2009) and emotional competence (Waples & Connelly, 2008) to influence follower perceptions of leader emotions.

Fifth, this effort confirms prior research on leader emotional displays finding that leaders expressing positive emotional states, discrete or mixed, were more favorably evaluated and perceived as better communicators. Additionally, results suggest that follower emotions help to

explain the relationship between leader emotion and leadership perceptions as leaders expressing positivity produced more positive feelings in followers. These findings coincide with the mood-congruent notion of judgment which suggests that individuals tend to make judgments that align with their emotional state (Forgas & Bower, 1987). However, it was also found that cognitive inferences related to the appropriateness of the emotional expression partially explain the leader emotion-leader perceptions relationship. Following leader emotional expressions, followers are likely to assess the extent to which the emotion is appropriate for the present context and this inference influences follower perceptions of leader effectiveness. Leaders exhibiting positive emotions, in this study, were rated as more appropriate suggesting that followers expect leaders to express positivity in leader-follower settings based on implicit theories of leadership (Lord, Binning, Rush, & Thomas, 1978).

Finally, leader emotion expressions did not exhibit any direct effects on follower performance, however, the information processing induced by leader emotions did partially explain performance differences. Namely, leader displays of negative mixed emotions lead to greater depth of processing in followers, which in turn, resulted in better follower performance compared to mixed valence, positive mixed, and anger expressions. Additionally, pride expressions produced greater depth of processing compared to positive mixed emotions, resulting in higher performance. These findings provide insight into the leader emotion-performance relationship and indicate that the cognitive processes induced in followers after observing leader emotions help explain how and why leader emotions influence follower outcomes. While additional research is needed to explicitly assess follower information processing, this study provides insight into a new pathway worth examining in the leader emotional displays literature.

Theoretical Implications

This research provides important theoretical implications for research on leader emotional expressions. First and foremost, this study adds to the growing body of literature on leader emotions and extends leadership research beyond general affect and single-emotion displays. Several studies illustrate that the emotional experiences of leaders involve complex, mixed feeling states (e.g., Hassett, Reynolds, & Sandberg, 2018; Madera & Smith, 2009) and more research is warranted to understand the interpersonal effects, as well as intrapersonal effects, that these emotions have on effective leadership. In the present study differences were not found between single emotions and mixed emotions in regard to ratings of leader competence or communication effectiveness. However, the performance differences attributable to negative mixed emotions represent an important implication for leadership research. Despite the tendency for leadership research to stress that positive emotions relate to effective leadership (e.g., Joseph, Dhanani, Shen, McHugh, & McCord), negative emotions, such as anger and fear, may serve functional purposes, particularly for objective, performance outcomes. Interestingly, this study found that leaders expressing a combination of anger and fear produced high levels of follower performance even though followers rated these leaders less favorably than those expressing positive emotions. This suggests that leader negative emotions can result in beneficial, positive outcomes for leaders and future research should continue to uncover the conditions under which it may be good for leaders to feel bad.

This study also adds to our understanding of the mediating pathways influencing the relationships between leader emotions and effective leadership (van Knippenberg & Van Kleef, 2016). Findings of the present effort build upon past research examining emotional contagion in leadership and support the idea that the emotions elicited in followers by leaders significantly

shape follower perceptions of their leader. Since leader emotions produce similar feelings in followers, the positive (negative) emotions caused by leader positivity (negativity) has beneficial (harmful) effects for leader evaluations. Additionally, this study examined attributions of display appropriateness as a cognitive inference pathway finding that followers may make judgments about the appropriateness of the leader's emotional expression. These judgments influence how followers perceive the competence and communication abilities of their leader. Past research has examined additional cognitive inferences, such as performance inferences (Van Kleef et al., 2009), sincerity (Eberly & Fong, 2013), and trait-focused inferences (Shao et al., 2018), and this research adds to the list of cognitive responses followers have to leader emotions.

Another contribution of this effort is the attempt to capture the information processing produced by leader emotional expressions. A vast amount of research examines the intrapersonal effects of emotion on judgment and decision-making (Angie et al., 2011), yet less research has explicitly examined the interpersonal effects of emotion on cognitive processing in leader-follower contexts. It is well-established that followers catch leader emotions (Damen et al., 2008; Sy et al. 2005; Venus et al., 2013), but future research would benefit from understanding how certain leader emotion influences different thinking processes in followers. Leaders leading for specific endeavors, such as creativity and innovation, may benefit from the display of certain emotions given its influence on follower cognition. Rothman and Melwani (2017) contend that emotional complexity may stimulate followers to think in more complex, creative ways and this study provides some support for this claim.

Finally, this study brings to the light the need to consider boundary conditions for leader emotional expressions. While the present effort did not find any effects for situational uncertainty, different organizational settings come with different emotional standards and

expectations. For instance, followers expect leader positive emotion, rather than negative emotion, following successes (Koning & Van Kleef, 2015) and view sadness more favorably than anger during crises (Madera & Smith, 2009). However, little research has examined the interplay between contextual influences and leader emotional expressions. The dynamic, changing landscapes of organizations indicates that leaders display emotions under a variety of environmental conditions and these situations are likely to amplify or attenuate leadership behaviors.

Practical Implications

This study also has some value for informing leadership practices. While emotions are often spontaneous reactions in organizational life, the nature of the leadership makes emotional expressions a more deliberate and strategic process. Leaders need to consider their emotional strategies for motivating follower performance and building leader-follower relations. As evidenced in this study and past studies (e.g., Bono & Ilies, 2006; Connelly & Ruark, 2010; Waples & Connelly, 2008), positive emotions tend to produce favorable leader evaluations and be perceived as more appropriate, but positive emotions do not necessarily produce superior effects on objective outcomes, such as performance. Therefore, circumstances may require the expression of positive, negative, or combinations of emotions, depending on the environment, personality of the follower, or task at hand. Therefore, leaders should develop strategies for deploying negative or mixed emotional expressions in effective ways. These implications point to the importance of emotion regulation in leadership (Humphrey, 2012) as leaders need to develop the capacity to alter and modify their emotional expressions.

Limitations and Future Directions

Despite these implications, this study has limitations worth noting. First, this study was conducted in an experimental setting using an undergraduate sample and asked participants to respond to a written leader speech, limiting the extent to which the findings generalize to non-laboratory settings. Even though laboratory studies are necessary for isolating the effects of leader emotional expressions, additional research in a workplace setting is warranted to uncover the influence of emotional complexity and mixed emotions on leadership. Another limitation of this study is the lack of history and relationship between the leader and follower. Even though followers and leaders interact without having a significant history (e.g., listening to the speech of the company's CEO), with no prior relationship, perceptions in this simulation may have been driven by implicit conceptualizations of leadership. Conversely, followers who have a working relationship with the leader may be more receptive to mixed emotional or negative emotion expressions. Similarly, an organization's culture may influence the extent to which emotions are appropriate via the emotional climate or display rules (Ashkanasy & Humphrey, 2011). Future research would benefit from examining the influence of implicit leadership theories on leader emotional expressions as well as how leader-follower relationships and organizational culture influence evaluations of leader emotion. Additionally, a high proportion of participants in this study were female and gender differences in emotion perception (e.g., Deng, Chang, Yang, Huo, & Zhou, 2016; Hall & Matsumoto, 2004) may account for some of the results found in this effort.

Another limitation of this effort was the expression of emotions via a paper-pencil format. While the description of leader emotion included both verbal and non-verbal cues, the salience of leader emotional displays is likely stronger during real-world observations. However,

it does appear that participants correctly assessed the leader emotion manipulations. Additionally, the complexity of mixed emotional expressions indicates that a more intricate examination of mixed emotional display is warranted. Emotions can differ in appraisal dimensions (Ellsworth & Scherer, 2003), regulatory focus (Brockner & Higgins, 2001), and activating potential (Roseman, 1984), among others. Contrasting mixed emotional expressions along these specific dimensions may provide further insight into the beneficial effects of emotion complexity for leaders. A final limitation of this study was the examination of leader emotional displays in the absence of other leader traits. While this isolation is necessary to examine the effects attributable to leader emotion expressions, future research should examine the compensatory effects of leader emotion and non-emotion behaviors and abilities. For instance, how do emotional and non-emotional aspects of leadership work in tandem to influence leader effectiveness. Future work would benefit from integrating emotional and non-emotional approaches to the study of leadership.

Conclusion

Emotional expressions represent a central mechanism of leader influence and this study adds to the body of literature on leader emotional displays and leadership effectiveness. While this study found little effects attributable to mixed emotional expressions in terms of leader evaluations and perceptions of communication effectiveness, preliminary evidence suggests that certain mixed emotional expressions may be beneficial for task performance given the information processing it induces in followers. Additionally, it was found that follower emotional reactions and inferences of display appropriateness mediate the relationship between leader emotion and perceptions of leader effectiveness. Leader emotions remain a growing interest among scholars and it is hoped that this effort stimulates new research in this area.

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Table 1

Means, Standard Deviations, and Correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7
1. Trait positive affect	3.48	0.70	(.84)						
2. Trait negative affect	2.52	0.72	-.26**	(.81)					
3. Agreeableness	4.00	0.63	.23**	-.19**	(.77)				
4. ACT	26.28	3.49	-.16*	-.02	-.22**	---			
5. Work experience	2.42	1.62	.14*	.00	-.02	-.10	---		
6. Epistemic motivation	2.92	0.75	.11	-.24**	.05	-.06	.07	(.80)	
7. STEM	0.67	0.15	-.02	-.01	.10	.01	-.04	.07	(.59)
8. Follower positive emotion	2.73	1.08	.20**	-.07	.07	-.18**	-.01	.08	.02
9. Follower negative emotion	2.20	1.04	-.20**	.10	-.07	.14*	.02	-.09	.09
10. Display appropriateness	3.60	1.22	.10	-.03	-.02	-.19**	-.05	.03	-.08
11. Follower flexibility	2.83	0.77	.12	-.06	.12	.02	.04	.07	.02
12. Follower depth of processing	2.83	0.87	.08	-.05	.07	.07	.11	-.00	.04
13. Leader competence	3.95	0.71	.20**	-.02	.15*	-.18**	-.01	-.04	.00
14. Leader communication	3.58	0.68	.18**	-.04	.18**	-.21**	-.17**	-.07	.01
15. Follower performance	2.73	0.84	.13*	-.04	.01	.10	.05	-.01	-.01

Note. N = 266. Reliabilities are presented along the diagonals. STEM = Situational Test for Emotion Management. Appropriateness = Appropriateness of leader emotional displays. * indicates $p < .05$. ** indicates $p < .01$.

Table 1 cont.

Means, Standard Deviations, and Correlations

Variable	8	9	10	11	12	13	14	15
1. Trait positive affect								
2. Trait negative affect								
3. Agreeableness								
4. ACT								
5. Work experience								
6. Epistemic motivation								
7. STEM								
8. Follower positive emotion	(.70)							
9. Follower negative emotion	-.68**	(.72)						
10. Appropriateness	.75**	-.73**	(.82)					
11. Follower flexibility	.02	.08	-.03	(.73)				
12. Follower depth of processing	.06	.14*	-.05	.70**	(.78)			
13. Leader competence	.55**	-.50**	.68**	-.06	-.10	(.93)		
14. Leader communication	.48**	-.48**	.60**	-.05	-.10	.78**	(.82)	
15. Follower performance	.09	.01	.06	.38**	.43**	.04	.02	(.73)

Note. N = 266. Reliabilities are presented along the diagonals. STEM = Situational Test for Emotion Management. Appropriateness = Appropriateness of leader emotional displays. * indicates $p < .05$. ** indicates $p < .01$.

Table 2.

Means and Standard Deviations for Follower Emotions and Inferences Variables

		Positive Emotion		Negative Emotion		Appropriateness		Cognitive Flexibility		Depth of Processing	
Display	Uncertainty	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Negative Mixed	High Uncertainty (*n* = 26)	2.71	1.10	2.62	1.11	3.50	1.29	2.99	0.95	3.23	0.98
	Low Uncertainty (*n* = 29)	2.28	0.78	2.40	0.93	3.27	1.14	2.94	0.75	3.09	0.70
Mixed Valence	High Uncertainty (*n* = 26)	2.87	1.04	2.26	1.05	3.66	1.24	2.64	0.69	2.69	0.87
	Low Uncertainty (*n* = 26)	2.19	0.68	2.54	0.88	3.17	1.07	2.96	0.89	2.71	0.83
Positive Mixed	High Uncertainty (*n* = 24)	3.19	1.19	1.62	0.83	3.95	1.13	2.65	0.68	2.51	0.85
	Low Uncertainty (*n* = 28)	3.11	1.00	1.69	0.95	4.02	1.17	2.71	0.83	2.57	1.15
Anger	High Uncertainty (n = 27)	2.14	1.04	2.63	1.15	3.09	1.42	2.60	0.73	2.73	0.89
	Low Uncertainty (*n* = 27)	2.41	0.92	2.48	0.99	3.39	1.31	2.89	0.69	2.85	0.82
Pride	High Uncertainty (*n* = 26)	3.15	1.20	2.00	1.05	3.83	1.15	2.97	0.75	3.04	0.78
	Low Uncertainty (*n* = 27)	3.18	1.01	1.72	0.82	4.06	0.98	2.90	0.68	2.89	0.65

Note. N = 266. Appropriateness = Appropriateness of leader emotional displays. All ratings were made on a 5-point Likert scale.

Table 3.

Means and Standard Deviations for Leader Effectiveness and Performance Variables

		Leader Competence		Communication Effectiveness		Follower Performance	
Display	Uncertainty	*M*	*SD*	*M*	*SD*	*M*	*SD*
Negative Mixed	High Uncertainty (*n* = 26)	3.99	0.62	3.66	0.75	2.95	0.79
	Low Uncertainty (*n* = 29)	3.80	0.71	3.45	0.68	2.91	0.89
Mixed Valence	High Uncertainty (*n* = 26)	3.93	0.77	3.60	0.54	2.78	0.79
	Low Uncertainty (*n* = 26)	3.67	0.69	3.35	0.63	2.72	0.90
Positive Mixed	High Uncertainty (*n* = 24)	4.17	0.65	3.82	0.51	2.63	0.84
	Low Uncertainty (*n* = 28)	4.15	0.57	3.73	0.58	2.68	0.99
Anger	High Uncertainty (n = 27)	3.75	0.67	3.39	0.61	2.67	0.78
	Low Uncertainty (*n* = 27)	3.74	0.81	3.32	0.83	2.39	0.85
Pride	High Uncertainty (*n* = 26)	4.12	0.82	3.73	0.74	2.88	0.78
	Low Uncertainty (*n* = 27)	4.21	0.54	3.77	0.73	2.68	0.78

Note. N = 266. All ratings were made on a 5-point Likert scale.

Table 4.

ANCOVA Results for Follower Positive and Negative Emotional Reactions

	Follower Positive Emotion				Follower Negative Emotions			
Variable	*df*	F	*p*	n_p^2	*df*	F	*p*	n_p^2
Control variables								
Positive affect	1, 238	7.38	**.007**	.030	1, 255	13.49	**.008**	.050
ACT	1, 238	4.17	**.042**	.017	-----	----	----	----
Main effects								
Emotional Display	4, 238	8.87	**.000**	.132	4, 255	9.72	**.000**	.132
Situational Uncertainty	1, 238	1.05	.306	.004	1, 255	0.77	.380	.003
Interaction								
Emotion Display by Situational Uncertainty	4, 238	1.68	.156	.027	4, 255	0.86	.488	.013

Note. Bolded values represent significant p-values. n_p^2 = partial eta-squared.

Table 5.

ANCOVA Results for Appropriateness of Leader Emotional Displays

Variable	*df*	F	*p*	n_p^2
Control variables				
ACT	1, 212	5.62	**.019**	.026
Main effects				
Emotional Display	4, 212	3.36	**.011**	.060
Situational Uncertainty	1, 212	0.10	.922	.000
Interaction				
Emotion Display by Situational Uncertainty	4, 212	0.79	.532	.015

Note. $N = 223$. Bolded values represent significant p-values. n_p^2 = partial eta-squared.

Table 6.

ANCOVA Results for Follower Cognitive Flexibility and Depth of Processing

	Flexibility				Depth			
Variable	*df*	F	*p*	n_p^2	*df*	F	*p*	n_p^2
Main effects								
Emotional Display	4, 256	1.32	.264	.020	4, 256	4.10	**.004**	.060
Situational Uncertainty	1, 256	1.16	.290	.004	1, 256	1.30	.719	.001
Interaction								
Emotion Display by Situational Uncertainty	4, 256	0.79	.530	.012	4, 256	0.23	.920	.004

Note. N = 266. Bolded values represent significant p-values. n_p^2 = partial eta-squared.

Table 7.

Multicategorical Moderated Regression Results for Appropriateness of Leader Emotional Displays

Variable	Display Appropriateness
Step 1: Main Effects	
Negative Mixed	-.18*
Mixed Valence	-.18*
Positive Mixed	.01
Anger	-.23**
Emotional intelligence	-.08
F	3.59**
R^2	.07**
Step 2: Interaction	
Negative Mixed x emotional intelligence	-.05
Mixed Valence x emotional intelligence	-.06
Positive Mixed x emotional intelligence	-.10
Anger x emotional intelligence	-.10
F	2.15*
R^2	.08*
ΔF	0.41
ΔR^2	.01

Note. $N = 266$. Standardized beta coefficients are presented. $^{\dagger} p < .10$. * $p < .05$. ** $p < .01$.

Table 8.

Multicategorical Moderated Regression Results for Follower Cognitive Flexibility and Depth of Processing

Variable	Flexibility	Depth
Step 1: Main Effects		
Negative Mixed	.02	.09
Mixed Valence	-.08	-.12
Positive Mixed	-.13†	-.19*
Anger	-.10	-.08
Epistemic motivation	.08	.01
F	1.38	3.29**
R^2	.03	.06**
Step 2: Interaction		
Negative Mixed x epistemic motivation	.17*	.18*
Mixed Valence x epistemic motivation	.06	.08
Positive Mixed x epistemic motivation	.16†	.20*
Anger x epistemic motivation	.10	.08
F	1.44	2.75**
R^2	.05	.09**
ΔF	1.51	2.02
ΔR^2	.02	.03†

Note. $N = 266$. Standardized beta coefficients are presented. † $p < .10$. * $p < .05$. ** $p < .01$.

Table 9.

ANCOVA Results for Leader Competence and Communication Effectiveness

	Leader Competence				Communication Effectiveness			
Variable	*df*	F	*p*	n_p^2	*df*	F	*p*	n_p^2
Control variables								
Positive affect	1, 238	4.24	**.041**	.018	----	----	----	-----
ACT	1, 238	5.29	**.022**	.022	1, 235	12.12	**.001**	.050
Work experience	----	----	----	----	1, 235	13.22	**.000**	.053
Main effects								
Emotional Display	4, 238	4.20	**.003**	.066	4, 235	3.07	**.017**	.050
Situational Uncertainty	1, 238	0.95	.331	.004	1, 235	1.40	.238	.006
Interaction								
Emotion Display by Situational Uncertainty	4, 238	0.51	.731	.008	4, 235	0.40	. 809	.007

Note. N = 250 for leader competence. N = 247 for communication effectiveness. Bolded values represent significant p-values. n_p^2 = partial eta-squared.

Table 10.

Mediational Effects of Follower Emotional Reactions on Evaluations of Leader Competence

Mediator	Conditions	Indirect Effect	*SE*	95% CI
Positive Affect				
	Negative Mixed v. Anger	.05	.05	[-.04, .15]
	Mixed Valence v. Anger	.07	.05	[-.02, .16]
	Positive Mixed v. Anger^{+}	.22	.06	[.11, .35]
	Pride v. Anger^{+}	.24	.06	[.12, .37]
	Negative Mixed v. Pride^{+}	-.19	.06	[-.31, -.08]
	Mixed Valence v. Pride^{+}	-.17	.06	[-.29, -.06]
	Positive Mixed v. Pride	-.02	.05	[-.13, .08]
	Mixed Valence v. Negative Mixed	.01	.05	[-.08, .11]
	Positive Mixed v. Negative Mixed^{+}	.17	.06	[.07, .28]
	Mixed Valence v. Positive Mixed^{+}	-.15	.05	[-.28, -.07]
Negative Affect				
	Negative Mixed v. Anger	.01	.03	[-.06, .08]
	Mixed Valence v. Anger	.03	.03	[-.04, .10]
	Positive Mixed v. Anger^{+}	.14	.06	[.04, .27]
	Pride v. Anger^{+}	.11	.05	[.03, .22]
	Negative Mixed v. Pride^{+}	-.10	.05	[-.21, -.03]
	Mixed Valence v. Pride^{+}	-.09	.04	[-.18, -.02]
	Positive Mixed v. Pride	.03	.03	[-.02, .10]
	Mixed Valence v. Negative Mixed	.02	.03	[-.04, .09]
	Positive Mixed v. Negative Mixed^{+}	.13	.05	[.04, .25]
	Mixed Valence v. Positive Mixed^{+}	-.12	.05	[-.23, -.03]

Note. $N = 266$. $^{+}$ denotes partial mediation. Unstandardized relative indirect effects are presented.

Table 11.

Mediational Effects of Follower Emotional Reactions on Leader Communication Effectiveness

Mediator	Conditions	Indirect Effect	*SE*	95% CI
Positive Affect				
	Negative Mixed v. Anger	.04	.03	[-.03, .11]
	Mixed Valence v. Anger	.05	.03	[-.02, .12]
	Positive Mixed v. Anger^{+}	.15	.05	[.07, .26]
	Pride v. Anger^{+}	.17	.05	[.08, .27]
	Negative Mixed v. Pride^{+}	-.13	.05	[-.23, -.05]
	Mixed Valence v. Pride^{+}	-.12	.05	[-.22, -.04]
	Positive Mixed v. Pride	-.01	.04	[-.09, .07]
	Mixed Valence v. Negative Mixed	.01	.03	[-.06, .07]
	Positive Mixed v. Negative Mixed^{+}	.11	.04	[.04, .22]
	Mixed Valence v. Positive Mixed^{+}	-.11	.04	[-.20, -.03]
Negative Affect				
	Negative Mixed v. Anger	.01	.04	[-.07, .09]
	Mixed Valence v. Anger	.03	.04	[-.04, .12]
	Positive Mixed v. Anger^{+}	.16	.06	[.07, .30]
	Pride v. Anger^{+}	.13	.05	[.04, .25]
	Negative Mixed v. Pride^{+}	-.12	.05	[-.22, -.04]
	Mixed Valence v. Pride^{+}	-.10	.04	[-.20, -.03]
	Positive Mixed v. Pride	.04	.04	[-.02, .11]
	Mixed Valence v. Negative Mixed	.02	.04	[-.05, .09]
	Positive Mixed v. Negative Mixed^{+}	.15	.05	[.06, .27]
	Mixed Valence v. Positive Mixed^{+}	-.14	.05	[-.24, -.05]

Note. $N = 266$. $^{+}$ denotes partial mediation. Unstandardized relative indirect effects are presented.

Table 12.

Mediational Effects of Display Appropriateness on Evaluations of Leader Competence

Mediator	Conditions	Indirect Effect	*SE*	95% CI
Display Appropriateness				
	Negative Mixed v. Anger	.05	.10	[-.15, .26]
	Mixed Valence v. Anger	.06	.10	[-.14, .26]
	Positive Mixed v. Anger^{+}	.30	.11	[.08, .49]
	Pride v. Anger^{+}	.27	.10	[.08, .46]
	Negative Mixed v. Pride^{+}	-.22	.09	[-.40, -.04]
	Mixed Valence v. Pride^{+}	-.21	.09	[-.39, -.04]
	Positive Mixed v. Pride	.02	.09	[-.15, .19]
	Mixed Valence v. Negative Mixed	.01	.10	[-.18, .20]
	Positive Mixed v. Negative Mixed^{+}	.24	.10	[.04, .44]
	Mixed Valence v. Positive Mixed^{+}	-.22	.10	[-.42, -.04]

Note. $N = 235$. $^{+}$ denotes partial mediation. Unstandardized relative indirect effects are presented.

Table 13.

Mediational Effects of Display Appropriateness on Leader Communication Effectiveness

Mediator	Conditions	Indirect Effect	*SE*	95% CI
Display Appropriateness				
	Negative Mixed v. Anger	.04	.09	[-.12, .22]
	Mixed Valence v. Anger	.05	.09	[-.12, .22]
	Positive Mixed v. Anger^{+}	.24	.09	[.07, .43]
	Pride v. Anger^{+}	.23	.08	[.07, .40]
	Negative Mixed v. Pride^{+}	-.18	.070	[-.33, -.04]
	Mixed Valence v. Pride^{+}	-.18	.07	[-.32, -.04]
	Positive Mixed v. Pride	.01	.07	[-.13, .16]
	Mixed Valence v. Negative Mixed	.01	.08	[-.15, .17]
	Positive Mixed v. Negative Mixed^{+}	.20	.08	[.04, .37]
	Mixed Valence v. Positive Mixed^{+}	-.19	.08	[-.36, -.04]

Note. $N = 235$. $^{+}$ denotes partial mediation. Unstandardized relative indirect effects are presented.

Table 14.

Mediational Effects of Follower Inferences Characteristics on Follower Performance

Mediator	Conditions	Indirect Effect	*SE*	95% CI
Flexibility				
	Negative Mixed v. Anger	.04	.04	[-.01, .13]
	Mixed Valence v. Anger	.01	.03	[-.04, .08]
	Positive Mixed v. Anger	-.01	.03	[-.06, .05]
	Pride v. Anger	.03	.03	[-.01, .12]
	Negative Mixed v. Pride	.00	.03	[-.06, .07]
	Mixed Valence v. Pride	-.02	.03	[-.10, .03]
	Positive Mixed v. Pride	-.04	.04	[-.13, .01]
	Mixed Valence v. Negative Mixed	-.03	.03	[-.11, .03]
	Positive Mixed v. Negative Mixed	-.05	.04	[-.15, .01]
	Mixed Valence v. Positive Mixed	.02	.03	[-.03, .10]
Depth				
	Negative Mixed v. Anger^{+}	.11	.06	[.01, .25]
	Mixed Valence v. Anger	-.03	.05	[-.15, .07]
	Positive Mixed v. Anger	-.07	.06	[-.21, .03]
	Pride v. Anger	.05	.05	[-.03, .16]
	Negative Mixed v. Pride	.06	.05	[-.03, .17]
	Mixed Valence v. Pride	-.08	.05	[-.20, .01]
	Positive Mixed v. Pride^{+}	-.13	.06	[-.27, -.02]
	Mixed Valence v. Negative Mixed^{+}	-.14	.07	[-.29, -.03]
	Positive Mixed v. Negative Mixed^{+}	-.19	.08	[-.36, -.06]
	Mixed Valence v. Positive Mixed	.04	.05	[-.06, .17]

Note. $N = 266$. $^{+}$ denotes partial mediation. Unstandardized relative indirect effects are presented.

Appendix A

INNOtech Case

General Instructions

In this portion of the study, you will be asked to take on the role of a market research analyst at INNOtech Corporation, a computer technology company. INNOtech sells a variety of innovative consumer electronics and has recently developed a piece of technology that they are planning to implement soon. After reading information about the company background and their new technology, you will be asked to create the final plan for a marketing campaign for the release of this product. **Read the following information carefully** as they contain important information.

Organizational Background – INNOtech Corporation

You are currently an employee for INNOtech Corporation, a technology company based in Dallas, Texas that specializes in the design, development, and selling of consumer electronics and computer software. INNOtech, a relatively young company, had unremarkable beginnings going through several years of low level growth and development. Despite their early struggles, a change in senior leadership, which took place a few years ago, has increased the innovation of the company and, recently, INNOtech has started to gain ground on the leading companies in the technology industry.

The main goal INNOtech and their CEO have decided to pursue is to develop new artificial intelligence system for smartphones. The idea is to become an equal to the top businesses in the market and their artificial intelligence software, which is something that other upcoming companies have failed to accomplish. INNOtech is hoping the release of this exciting software will cement their place among the top of the technology industry.

At INNOtech, you are a market research analyst within the marketing division. This position involves tasks such as formulating and developing marketing strategies to promote products and technologies, collecting information and data on consumers and competitors, and creating reports and strategies on related findings. In addition, you are often tasked with developing the marketing campaigns for the launch of new INNOtech products. You have been in this position for a little more than a year.

Current Situation

INNOtech has recently developed a state-of-the-art artificial intelligence technology, *Portal*, that they are planning to incorporate into their smartphone devices within the coming year. The CEO of INNOtech, who has fostered of a culture of creative thinking, innovation, and commitment, believes that this technology will allow your company to rival other technology giants and bring competition to this market.

The Research and Development Division has released information about *Portal* to other divisions of the company to prepare for the upcoming strategic planning retreat. Below are the key points and features of *Portal*.

- *Portal* will be the first artificial intelligence (AI) software released by INNOtech.
- The *Portal* software will allow smartphone devices to learn tasks and behaviors through the pattern of user behavior and data.
- *Portal* will be an on-device AI system, as opposed to being run through a cloud network, providing better privacy and higher performance to consumers.
- *Portal* includes a voice-activated virtual assistant that can allow users to search the web, get directions, send a text or email, schedule an event, order products online, and allow users to connect and communicate with compatible devices (e.g., TV, laptop)
- *Portal* can adjust security settings and optimize battery-life based on individual use.
- *Portal* comes with enhanced image recognition for user photos in addition to improved photo and file (document) organization and sharing.

Appendix B

Strategic Planning Retreat

Negative Mixed Condition

Manipulation key: High uncertainty is **boldfaced**; low uncertainty is <u>underlined.</u> Leader emotional display is *italicized.*

Your company is having its annual strategic planning retreat, where key managers and employees from the major company divisions come together to create strategic plans for meeting the year's objectives. As part of this two-day meeting, the CEO is meeting individually with key teams in each division. He has just met with the marketing team that you are a part of. Here is what the CEO said to your group regarding the launch of INNOtech's newest technology.

"Before each division proceeds to the technical aspect of this planning retreat, I wanted an opportunity to meet with the key teams at INNOtech to discuss recent business trends and put our new mission into context. In particular, I want to talk about the importance of your team's role in launching *Portal*, our artificial intelligence software."

"Let me begin by explaining the situation facing us. **The area of artificial intelligence is an emerging area of technology that is very different from the current products we have developed here at INNOtech, which creates uncertainty for our company.** (<u>The area of artificial intelligence, while an emerging area of technology, is a natural progression from our current products, which creates a clear path for our company</u>). So, what does this mean for us? **We at INNOtech are embarking on a journey into the unknown, so to speak. While we have our eyes set on the industry leader, we don't know how many other smaller companies are attempting this. As we venture into a new area of technology, we must recognize the inherent uncertainty in this mission and rely on our talents to guide our success.** (<u>Even though we are expanding into a new technology market, we know what we are getting into as a company. We know who our competitors are in this sector as well as the companies that we do not need to worry about. There should be few surprises as we journey down this road and rely on our talents to guide our success.</u>)"

"As you know, in the last year, INNOtech has made some outstanding research advances with the development of *Portal*, a software that will change the face of the industry. But, have you heard the comments our competitors have made about us? The industry leader views us as being in over our heads and biting off more than we can chew. *They think we have neither the talent nor the resources to be competitive in this market. How did you feel when you heard that? I'll tell you how I felt…outraged! Who the hell are they to say what INNOtech can and can't do? They think they are untouchable, but just wait until they see our software outperforming their own and INNOtech driving the market (your CEO has an angry edge in his voice and is clearly irritated about this).* The release of *Portal* will help strengthen our company and position us for vigorous growth."

"Our company has made the bold decision to take on an area of technology that has been a monopoly for too long. *While I will not let other companies to dictate our actions at INNOtech, I believe it is also important to be realistic. Expanding into a new sector of the technology industry leaves us vulnerable to new threats and competitors (the anger of CEO appears to have shifted to an expression of worry). If we do not effectively launch this product, we may lose all the ground that we have gained in the industry and fall by the wayside as we are surpassed by rival companies."*

"It is time to focus our attention on the task at hand. This marketing team needs to get our new artificial intelligence software out to our current customers and to new customers and help them recognize that the future of technology is with INNOtech, not the industry leader. As you consider your role and directions for the launch of this project, I want you to *think about how upset it made you to hear that other competitors do not view us as a threat to their success. But, I also want you to keep in mind the significant consequences that could come about if the launch of this products fails.* Your task is to reach our customer base, the customer base of the industry leader, and every business, large or small. We've been the underdog for too long and we have the talent and creativity necessary to change that. Use your emotion to a purpose so INNOtech can re-ignite innovation and become a leader in the industry."

Mixed Valence Condition

Manipulation key: High uncertainty is **boldfaced**; low uncertainty is <u>underlined.</u> Leader emotional display is *italicized.*

Your company is having its annual strategic planning retreat, where key managers and employees from the major company divisions come together to create strategic plans for meeting the year's objectives. As part of this two-day meeting, the CEO is meeting individually with key teams in each division. He has just met with the marketing team that you are a part of. Here is what the CEO said to your group regarding the launch of INNOtech's newest technology.

"Before each division proceeds to the technical aspect of this planning retreat, I wanted an opportunity to meet with the key teams at INNOtech to discuss recent business trends and put our new mission into context. In particular, I want to talk about the importance of your team's role in launching *Portal*, our artificial intelligence software."

"Let me begin by explaining the situation facing us. **The area of artificial intelligence is an emerging area of technology that is very different from the current products we have developed here at INNOtech, which creates uncertainty for our company.** (<u>The area of artificial intelligence, while an emerging area of technology, is a natural progression from our current products, which creates a clear path for our company</u>). So, what does this mean for us? **We at INNOtech are embarking on a journey into the unknown, so to speak. While we have our eyes set on the industry leader, we don't know how many other smaller companies are attempting this. As we venture into a new area of technology, we must recognize the inherent uncertainty in this mission and rely on our talents to guide our success.** (<u>Even though we are expanding into a new technology market, we know what we are getting into as a company. We know who our competitors are in this sector as well as the companies that we do not need to worry about. There should be few surprises as we journey down this road and rely on our talents to guide our success.</u>)"

"As you know, in the last year, INNOtech has made some outstanding research advances with the development of *Portal,* a software that will change the face of the industry. But, have you heard the comments our competitors have made about us? *The industry leader views us as being in over our heads and biting off more than we can chew. They think we have neither the talent nor the resources to be competitive in this market. How did you feel when you heard that? I'll tell you how I felt…outraged! Who the hell are they to say what INNOtech can and can't do? They think they are untouchable, but just wait until they see our software outperforming their own and INNOtech driving the market (your CEO has an angry edge in his voice and is clearly irritated about this).* The release of *Portal* will help strengthen our company and position us for vigorous growth."

"Our company has made the bold decision to take on an area of technology that has been a monopoly for too long. *Recognize the potential achievements ahead of us. I am very pleased with the effort that each and every one of you have dedicated to INNOtech (the anger of CEO appears to have shifted to a sense of pride). We have skills and abilities that rival any other*

company out there. We are the only ones that will dictate whether or not this release is a success!"

"It is time to focus our attention on the task at hand. This marketing team needs to get our new artificial intelligence software out to our current customers and to new customers and help them recognize that the future of technology is with INNOtech not the industry leader. As you consider your role and directions for the launch of this project, I want you to *be proud of this company and the products we develop and remember how upset it made you to hear that other competitors do not view us as a threat to their success.* Your task is to reach our customer base, the customer base of the industry leader, and every business, large or small. We've been the underdog for too long and we have the talent and creativity necessary to change that. Use your emotion to a purpose so INNOtech can re-ignite innovation and become a leader in the industry."

Anger Condition

Manipulation key: High uncertainty is **boldfaced**; low uncertainty is <u>underlined.</u> Leader emotional display is *italicized.*

Your company is having its annual strategic planning retreat, where key managers and employees from the major company divisions come together to create strategic plans for meeting the year's objectives. As part of this two-day meeting, the CEO is meeting individually with key teams in each division. He has just met with the marketing team that you are a part of. Here is what the CEO said to your group regarding the launch of INNOtech's newest technology.

"Before each division proceeds to the technical aspect of this planning retreat, I wanted an opportunity to meet with the key teams at INNOtech to discuss recent business trends and put our new mission into context. In particular, I want to talk about the importance of your team's role in launching *Portal*, our artificial intelligence software."

"Let me begin by explaining the situation facing us. **The area of artificial intelligence is an emerging area of technology that is very different from the current products we have developed here at INNOtech, which creates uncertainty for our company.** (<u>The area of artificial intelligence, while an emerging area of technology, is a natural progression from our current products, which creates a clear path for our company</u>). So, what does this mean for us? **We at INNOtech are embarking on a journey into the unknown, so to speak. While we have our eyes set on the industry leader, we don't know how many other smaller companies are attempting this. As we venture into a new area of technology, we must recognize the inherent uncertainty in this mission and rely on our talents to guide our success.** (<u>Even though we are expanding into a new technology market, we know what we are getting into as a company. We know who our competitors are in this sector as well as the companies that we do not need to worry about. There should be few surprises as we journey down this road and rely on our talents to guide our success.</u>)"

"As you know, in the last year, INNOtech has made some outstanding research advances with the development of *Portal*, a software that will change the face of the industry. But, have you heard the comments our competitors have made about us? *The industry leader views us as being in over our heads and biting off more than we can chew. They think we have neither the talent nor the resources to be competitive in this market. How did you feel when you heard that? I'll tell you how I felt…outraged! Who the hell are they to say what INNOtech can and can't do? They think they are untouchable, but just wait until they see our software outperforming their own and INNOtech driving the market (your CEO has an angry edge in his voice and is clearly irritated about this).* The release of *Portal* will help strengthen our company and position us for vigorous growth."

"Our company has made the bold decision to take on an area of technology that has been a monopoly for too long. *And I will not let other companies to dictate our actions at INNOtech! (Your CEO slams his fit down on the table and shakes his head in frustration). We will not bow down to the wishes of our competitors. We will fight them every step of the way until we reach our rightful place at the top of the market."*

"It is time to focus our attention on the task at hand. This marketing team needs to get our new artificial intelligence software out to our current customers and to new customers and help them recognize that the future of technology is with INNOtech not the industry leader. As you consider your role and directions for the launch of this project, I want you to *consider how upset it made you to hear that other competitors do not view us as a threat to their success and how frustrating it is to think that other companies have power over or success.* Your task is to reach our customer base, the customer base of the industry leader, and every business, large or small. We've been the underdog for too long and we have the talent and creativity necessary to change that. Use your emotion to a purpose so INNOtech can re-ignite innovation and become a leader in the industry."