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An Examination of CEO Emotion's Relationship with Organization-Level Performance

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AN EXAMINATION OF CEO EMOTION'S RELATIONSHIP WITH

ORGANIZATION-LEVEL PERFORMANCE

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By

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      I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY <u>Elizabeth Peyton</u> ENTITLED <u>An Examination of CEO Emotion's Relationship with Organization-Level Performance</u> BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF <u>Master of Science</u>.

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ABSTRACT

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My study examined the relationship between CEO emotions and organization-level

performance. I also tested the feasibility of using FACS in a business setting. Lastly, I

explored the nature of CEOs' expressive styles. I found support for a relationship

between CEOs' positive emotion displays and organization-level performance, but not a

relationship between CEOs' negative emotion displays and organization-level

performance. My results also supported the idea that CEOs have a unique and consistent

expressive style that remains independent of displayed emotion and that researchers can

use FACS to measure this expressive style.

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The emotions of CEOs influence organization-level performance. Emotions have two major functions in the CEO-subordinate relationship that allow emotion to influence a distal outcome. Emotions function as both a communication aid for the CEO (through affective displays such as facial expression; Ekman, 1992; Izard, 1977; Russell & Fernandez-Dols, 1997) and a tool of reasoning for the subordinate (through its role in memory storage; Ashkanasy, 2003a; Damasio, 1994). Through these functions, leaders influence subordinate behaviors. In addition to its roles in the CEO-subordinate relationships, emotion has a contagious nature (Cacciopo, Hansen, & Robson, 1994; Hendriks & Vingerhoets, 2006). It can spread like a virus through a large body of people, such as an organization. Two streams of research exist on the relationship between leaders and performance, one describing the leader's impact on the individual-level performance, and another describing the leader's impact on organization-level performance. By examining emotion's roles in cognition and communication, and understanding its contagious nature, I will reconcile both streams of research. I propose a conceptual model relating specific leader emotions to organization-level performance.

Emotion

The first step in understanding the relationship between CEO emotion and organization-level performance is understanding emotion, the connector between the two.

Understanding what emotion is, why it exists, and what functions it serves will illuminate the interconnection between CEOs and organization-level performance.

      Background. Many definitions of emotion exist, but researchers agree that emotion consists of transitory states of persons denoted in everyday language by words such as 'happiness', 'sadness', and 'fear' (Reisenzein & Weber, 2009). Researchers also agree that emotions occur in reaction to some environmental stimulus and that they have both objective and subjective manifestations (Reisenzein & Weber, 2009).

      Before further discussing emotion, I must differentiate emotion from two related concepts, moods and attitudes. Researchers consider both moods and attitudes distinct from emotion. Length of time and focal point distinguish these three concepts from one another. Emotions last for a shorter time period whereas moods tend to last longer (Frijda, 2008). Attitudes endure longest, sometimes lasting up to a lifetime (Frijda, 2008). In this sense emotions, moods, and attitudes are points on a time continuum (Frijda, 2008). In addition to length of time, emotions and attitudes have a different focal point than moods. Emotions and attitudes are both characterized by an appraisal of a single stimulus. Emotion, however, is only one component of an attitude (also referred to as a general sentiment; Schleicher, Hansen, & Fox, 2011). In addition to an emotional, or affective, component, attitudes contain a cognitive and a behavioral component (Schleicher, Hansen, & Fox, 2011). For example, an employee might hold an attitude that he likes his manager. After an interaction with his manager, the employee might experience happiness (the affective component). He might think about how he likes his manager (the cognitive component). Finally, the emotional and cognitive components influence the employee to seek out his boss for conversation (the behavioral component).

In contrast to emotions and attitudes, moods are more general and not directed at a single stimulus (Frijda, 1994). Consequently, an individual experiencing a mood may not know what caused the mood's onset. The commonalities between these three constructs make it difficult for researchers to create a measure that assesses only the desired construct.

Continuing with the background on emotion, the first known existence of the word emotion in the present sense dates back to Descartes's *Passions de l'Âme*, which corresponds to "uproar" or "social unrest," (Frijda, 2008). Before Descartes many societies had words to describe an emotional state. These words focused on the passivity of the state (i.e., the French and British word of *passion*). Emotions were things that happened to people without their control (Frijda, 2008).

Psychological theories of emotion began with William James's (1884) and Carl Lange's (1885) theories of emotion. Each independently developed a theory that described emotion as the automatic reaction to one's conscious appraisal of a stimulus (Weiten, 2004). In other words, if a person sees a snake, he thinks he should feel afraid and then the physiological response of fear follows automatically. Half a century later, Cannon (1927) noticed that emotion did not always accompany arousal (e.g., exercising) and concluded that, in contrast to the James-Lange theory, physiological arousal occurred first and the feeling of emotion followed. Philip Bard (1934) later elaborated on this theory, creating the Cannon-Bard theory of emotion (Weiten, 2004). The most recent theory of emotion, Schachter's Two-Factor Theory, described emotional experience as involving two factors: autonomic arousal and cognitive interpretation (Schachter, 1964). He combined notions from the two previous theories to conclude that people do feel

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emotional arousal in response to stimuli. However, they use cues from the environment in order to appraise what emotion they feel.

Emotions contain both automatic and effortful components (Gross, 2008). Models of emotional regulation contrast "automatic" and "deliberate" processes. Automatic processes do not require attention or awareness and are stimulus-driven. Deliberate processes involve effort and awareness and are goal-driven. Mauss, Cook, and Gross (2007) found that emotion regulation might activate implicitly (outside of conscious awareness). They primed participants before a task during which most participants became angry. Those participants primed with emotional control reported feeling less angry than the participants primed for emotional expression.

Emotion functions. Emotion has two functions that make it a likely mechanism for linking leader behavior and organizational performance: communication (Ekman, 1992) and reasoning (Damasio, 1994). The communication aspect allows emotion to influence social interaction, even implicitly. Emotion's role in reasoning is implicit as well and, therefore, may play a large role in decision-making and, consequently, behavior. Next I will discuss these two functions of emotion and their role in linking leader emotion to organizational performance.

Emotion as a communication tool. According to one of the most influential theories on emotional expression, Discrete Emotions Theory (Izard & Malatesta, 1987; Magai & McFadden, 1995; Malatesta, 1990; Tomkins, 1962), emotion has an evolutionary function. The theory identified three processes of emotion that illustrate its utility to humans: first, emotions direct attention to the potential causes of the emotion and adaptive responses (Schwarz, 1990); second, emotions prepare individuals for actions

in response to this potential cause (Frijda, 1986); third, emotional responses (such as distinct facial, postural, vocal, and verbal behavior) communicate these emotions to others (Ekman, 1992; Izard, 1977).

The involuntary, reactionary nature of emotions (Gross, 2008) supports an innate emotional communication system (Ekman, 1992; Haggard & Isaacs, 1966; Izard, 1977). Ekman (1992) theorized that emotions evolved in order to deal with fundamental life tasks (e.g., fleeing from danger). The emotional response involves three processes: focusing attention on an environmental stimulus, stimulating a physiological response, and communicating the situation to others (Ekman, 1992; Izard, 1977). For example, if an individual encountered a poisonous snake, he would have an emotional response, focusing his attention on the snake (process one), stimulating a physiological reaction preparing him to either fight the snake or flee the area (process two), and his facial, postural, vocal, and verbal behavior would communicate fear and the presence of a danger to others around him (process three). This third process, the communication aspect, involves facial expressions and strengthens the link between personality and emotional expression. Each of the universally recognized emotions (such as anger, fear, disgust) has a distinct set of facial, postural, vocal, and verbal behavior (Ekman, 1992; Izard, 1977), making them useful as communication tools.

Emotion as a communicator of personality. Researchers have found a link between emotional displays and personality. This means that an emotional display, although fleeting itself, might indicate a stable trait (Keltner, 1996). Each of the universally recognized emotions (such as anger, fear, disgust) is signaled by a distinct set of facial, postural, vocal, and verbal behavior (Ekman, 1992; Izard, 1977). Individuals

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have genetic predispositions to different types of emotional expression tendencies (e.g., Ekman, 1984; Izard, 1972; Malatesta, 1990; Nelson & De Haan, 1997). Temperaments lend individuals toward certain affective tendencies involving distinct sets or patterns of facial, postural, vocal, and verbal behaviors (Keltner, 1996). From infancy, these affective tendencies influence the individual's social interactions. The tendencies' distinct behavior sets or patterns of communication likely represent an "expressive style" of personality (Magai & McFadden, 1995; Malatesta, 1990). This style informs others of an individual's emotions, which in turn, evokes an emotional response from them. The individual then responds to the others' emotional responses. This cycle of emotional expression, emotional evocation, and emotional expressive response shapes social contexts, interactions, and relations (Keltner, 1996). If this cycle holds true, an individual's genetic predisposition toward a certain temperament begins shaping social interactions from childhood. Consequently, individuals of certain dispositions will begin to display certain emotional tendencies. Thus, emotional responses, indicative of emotional tendencies, can signal more than just fleeting states (Keltner, 1996). Emotional tendencies, such as facial expressions, can reflect more enduring information such as an individual's social role and personality (Keltner, 1996).

As a component of emotion, facial expression functions as an important form of non-verbal communication (Ekman, 1992; Izard, 1977). Many researchers consider facial expressions the central signal of emotions (Ekman, Friesen, & Ellsworth, 1972; Izard, 1972; Tomkins, 1962). Researchers have found universal emotional displays in facial expressions (Ekman, 1980) that begin very early in life (Izard & Tomkins, 1965; Keltner,

1996) and are automatic (Tomkins & Izard, 1965). These facts all suggest that facial expression developed as a form of communication.

The emotional component of facial expression. Documented facial expression research began as early as Darwin who observed expression in animals as well as in his own children (Darwin, 1872). Darwin undisputedly wrote of his observations about facial expressions (Russell & Fernandez-Dols, 1997). In order to explore the form and purpose of facial expression, Darwin studied the facial expressions of nonhuman primates (Ekman, 1973). Darwin published his work on emotion in *The Expression of the Emotions in Man and Animals*. The book was a best seller. Despite its success, the scientific community largely ignored Darwin's work. The primary reason remains unknown. However, current researchers theorized Darwin's methods, such as his use of anthropomorphic terms to describe animals and his reliance on anecdotal data, might have limited the books influence with the scientific community (Ekman, 1972).

The meaning of what Darwin wrote remains ambiguous (Russell & Fernandez-Dols, 1997). His notions of "emotion" and "expression" were much more general and loosely related to the modern use of the words (Russell & Fernandez-Dols, 1997). His descriptions were also vague, which contributed to the later researchers' varying interpretations of his work. For example, Ekman (1972) proposed that Darwin used his observations of facial expression to draw conclusions about the evolution of facial expression in humans as a communication tool (Ekman, 1973). In contrast, Russell and Fernandez-Dols (1997) maintained that Darwin concluded that facial expression had no use.

Regardless of his intent, researchers gleaned the idea that the face expresses emotion from Darwin's work (Russell & Fernandez-Dols, 1997). Although the scientific community openly ignored Darwin's work (Ekman, 1997), it continued to discreetly influence facial research (Russell & Fernandez-Dols, 1997). Facial expression researchers in the early 1900s emulated Darwin's open-mindedness and innovative methods. They used these methods to challenge previous thought on facial expression and explored something Darwin had ignored, the role of context in facial expression (Russell & Fernandez-Dols, 1997).

According to Russell and Fernandez-Dols (1997), between 1930 and 1960 three formalized schools of thought about facial expression developed. The first school involved emotion families. Woodsworth (1938) proposed that facial expressions do not convey specific emotions but families of emotions. Schlosberg (1941, 1952, 1954) proposed that each family would have the same underlying components, such as pleasantness or unpleasantness, arousal or relaxation, attention or rejection. Additional researchers found this theory valid cross-culturally (Triandis & Lambert, 1958). Osgood (1955, 1966) began the second school of thought. He defined the meaning of facial display as the observer's response to it. He also provided evidence for cross-culture universality of facial meaning (Osgood, 1955, 1966). Frijda (1953, 1958, 1969) and his colleagues began a third school of thought by proposing an information-processing model of emotional perception in the face. They also provided a multicomponent model of emotion that included facial expression as one component of emotion.

In 1962 two books--one by Tomkins and one by Plutchik--stimulated the growth of research in facial expression and began the modern era of psychology's study of facial

expression. Silvan Tomkins (1962) presented his theory of affect that suggested the face played a central role in emotional display (Rosenberg, 2005). Tomkins' work inspired Paul Ekman to conduct his now famous study about facial expression (Gladwell, 2002). Ekman traveled the world, including remote parts of Papau New Guinea where tribesman had had little to no contact with the outside world, with photographs of basic facial expressions. He found that people of all cultures could correctly identify six different emotions (Ekman, 1980). Ekman's study (Ekman, 1980) along with previous universality research (Osgood, 1955, 1966; Triandis & Lambert, 1958) provided support for emotion's evolutionary development as a communication tool (Keltner, 1996; Rosenberg, 2005).

By 1980, research from the Facial Expression Program dominated research on the face (Russell & Fernandez-Dols, 1997). Researchers (e.g., Paul Ekman) in this program had rediscovered Darwin's (1862/1965) book in the 1960s and made the issue of universality central (Russell & Fernandez-Dols, 1997). Since then the program has generated an incredible amount of research, more than any other program in emotional psychology (Russell & Fernandez-Dols, 1997). The work of the researchers in the Facial Expression Program still dominates the work of facial expression researchers in psychology (Russell & Fernandez-Dols, 1997), and greatly influences the theoretical background of my study.

Evidence for facial expression as a communicator of emotions. Research on babies too young to have learned facial expression supports the innateness and communication function of facial expressions (Camras & Witherington, 2005). Babies also demonstrate the necessity of including an automatic (uncontrollable) element to

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emotional communication. If babies had the ability to restrict their facial expressions, parents would struggle to understand what their children were feeling. This would inhibit parents' abilities to build strong relationships with their infants (Keltner, 1996). Additionally, one of the main ways in which infants communicate their needs to their parents is through facial expression. If an infant had the ability to inhibit her expressions, it would hinder communication with the parents, slowing relationship building and preventing the child from receiving needed care (Keltner, 1996).

Microexpressions are an example of automatic facial expression in adults. Haggard and Isaacs (1966) discovered facial expressions that can last as little as 1/25th of a second and labeled these microexpressions. These expressions are involuntary and, consequently, communicate raw emotion (Rosenberg, 2005). Adult communication, however, is more complex than infant communication because adults have the ability to control some emotional expressions. This creates a dynamic in which receivers of facial expressions not only passively receive emotional cues but also actively attempt to decipher the level of facial expression authenticity (Russell, Backorowski, & Fernandez-Dols, 2003).

Facial expressions not only communicate emotion to others but also serve as an internal communication tool for the individual experiencing the emotion (Strack & Deutsch, 2004). For example, Laird (e.g., 1974) found that when participants adopted a smiling expression, they gave more positive judgment about their own well-being and about cartoons presented as stimuli. According to Gladwell (2002), Ekman and Friesen had a similar experience when recreating facial expressions for their research. On the days in which they worked on recreating expressions of anger and distress, Ekman and

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Friesen both came home feeling terrible. They discovered that certain expressions alone could create changes in the autonomic nervous system, such as elevated heartbeat. Therefore, facial expressions can either be a result of an emotional experience or the cause of one. When examined with previous research on facial expressions as emotional responses (e.g., Schachter, 1964), the work of Laird, Ekman, and Friesen demonstrates the dual nature of facial expressions in the emotion communication process. Facial expression can operate as both an emotional response and an emotional stimulus.

Emotional contagion. Hatfield, Cacioppo, and Rapson (1994) suggested that moods and emotions spread similarly to viruses among individuals. In the process of emotional contagion senders communicate emotions implicitly. The receiver in an act of communication can actively interpret the emotions of the sender. In addition to the receiver's active, conscious response to the sender, there are also unconscious responses to the emotion the sender communicates. When the sender expresses an emotion, the receiver, most of the time unintentionally, mimics the emotional displays of the sender. For example, Dimberg, Thunberg, and Elmehed (2000) found that emotion displays shown outside of the conscious awareness of observers corresponded with muscle movement in observers. This mimicry then causes the second person to begin feeling the same emotion as the first person (Duclos et al., 1989; Strack, Martin, & Stepper, 1988). Studies have shown that this occurs in organizations and can lead to similar affect among group members (Barsade, 2002; Bartel & Saavedra, 2000; Totterdell, 2000; Totterdell, Kellett, Teuchmann, & Briner, 1998). Thus, in a work group the emotion of one person is likely to resemble the entire group's emotion.

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Emotion and reasoning. In addition to emotion's role in social interaction (e.g., facial expression), emotion makes reasoning possible (Damasio, 1995). Up to 95% of the reasoning process takes place on an unconscious level (Zaltman, 2003). When the brain stores an event into long-term memory, it must past through the hippocampus where it receives an emotional tag. Later, when the brain retrieves this event from memory, the brain retrieves the event with its emotional tag. The existence of this emotional tag allows people to reason (Damasio, 1995). Damasio (1995), in his work with brain trauma patients who had lost the ability to experience emotion, observed this phenomenon. These patients maintained their cognitive ability but had lost the ability to reason and make positive life choices. Without an emotional tag, they had no way of categorizing experiences. Therefore, every previous experience remained neutral. So, when trying to make a decision, they could recall only neutral experiences to compare with the current decision. Thus, they had no way reliable way of categorizing future decisions as good or bad in order to make their choice. They had lost their ability to reason.

As discussed above, reasoning is an interpretation of emotion. Therefore, if measures attempt to gauge behavior by asking people to either interpret or to reflect on an interpretation then they are one or two, respectively, levels away from the actual cause of the behavior, emotion. Gladwell (2006) observed how this interpretation of reason based on emotion can go awry in his study of novice jam tasters. In this study the novices who tasted the jam and then ranked it gave the jam similar rankings as experts. The novices who tasted the jam and then had to explain why they gave a jam a certain ranking ranked the jam much differently than the experts. This demonstrated how the explanation of an emotional process that an individual does not actually understand could be very different

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from the actual process. Because people use emotion to reason, but most do not understand this connection, it follows that emotion would have the strongest relationship with behavior. Consequently, the measurement of emotion, rather than its interpretation, should yield a more accurate prediction of behavior.

Taken together emotion's roles in communication and in reasoning can explain how leaders influence subordinates. Leaders communicate emotions, in part using facial expressions. Subordinates receive these communications and mirror the emotion transmitted by the leader. These emotions color their memories of work, and later, their reasoning about work-related events. This pattern of metacognition influences work behavior decisions, and therefore, work behavior, including performance.

If these two emotional functions do provide a mechanism for leader behavior to translate into organization-level performance, researchers should observe two things: (*a*) leaders' emotions influence subordinates' emotions and *(b)* subordinates' emotions predict their behaviors. In a study by Venkataramani, Green, and Schleicher (2010), the quality of the leader's relationship with a subordinate had a positive relationship with job satisfaction. Job satisfaction had a negative relationship with turnover intentions. Additionally, job attitudes related to the decision to retire (Schmitt & McCune, 1981). These studies support the proposition that emotion is a mechanism through which leader behavior translates into organization-level performance.

Emotion measurement. In my study I will operationalize emotion using facial expressions.   Ekman and Friesen (1978) have developed a coding system for facial expressions, including microexpressions, called the Facial Action Coding System (FACS). The face can move in 44 unique ways. Each of these movements is called an

Action Unit (AU). AU's by themselves or in combinations form facial expressions, called "events" (Rosenberg, 2005). FACS provides a method for recording not only which muscles movement occurred but also provides a method for recording how strong the movement was on a five-point scale. Researchers can use FACS and video recording technology in order to see expressions that even experienced interviewers or researchers might miss (Ekman, 1985). By slowing down the video footage, FACS researchers can record even subtle facial movement. After recording all facial movement, FACS researchers review the data and look for patterns of AUs that typically indicate the basic emotions (fear, anger, disgust, happiness, sadness, and surprise).

Emotional display's relationship with behavior. Because emotion plays a key role in reasoning, it can predict behavior. Previous research has estimated that 95 percent of the decision-making process is subconscious (Zaltman, 2003). Based on the knowledge of how memory and reasoning work (Damasio, 1995; Kandel & Schwartz, 1981), in order for an individual to make a purely rational decision about a job-related behavior such as turnover, she would have to run through every event that has ever happened to her relating to that job and then make her decision. This is impossible. Instead, emotion gives her the ability that cognitive thinking alone cannot--the ability to take into account every event that occurs at work by storing it into memory with an emotional tag. The events combine to give an overall feeling about the job, which is what the individual retrieves and interprets when making her decision about leaving or remaining in her current job.

The idea of measuring emotion as a true predictor of behavior is not new. In fact, it has recently gained wide-spread attention in the marketing world (Hill, 2010; Pradeep,

2010). These sources suggested that emotion predicts behavior, but they have posted weak arguments for the connection. The strongest studies on this link have come from clinical work. In *What the Face Reveals*, Ekman and Rosenberg (2005) have combined an array of studies that link emotional reactions to behavioral outcomes.

FACS has linked microexpressions to behavioral outcomes more strongly than previous links between emotion and behavior found using self-report methods (Chesney et al., 2005; Heller & Havnal, 2005; Keltner, Mofitt & Stouthamer-Loeber, 2005). Heller and Havnal (2005), for example, studied suicide attempt prediction. They found that, in general, suicidal and nonsuicidal patients showed many types of facial movements when responding to a question regarding their desire to die or attempt suicide. Unlike nonsuicidal patients, however, the movement of suicidal patients was restricted to the lower region of their faces. This restriction of movement was a better indicator of a future suicide attempt than level of depression. Chesney et al. (2005) showed how certain patterns of facial expression could indicate Type A personality, a coronary-prone personality type. Coders found that men with a Type A personality displayed more instances of the emotions Glare and Disgust than did men with a Type B personality, revealing more information than the standard assessment for Type A personality, the structured interview. Keltner, Moffitt and Stouthamer-Loeber (2005) found differences in types of facial expressions between disordered and nondisordered adolescent boys. The combination of these studies supports the relationship between microexpressions and behavioral outcomes.

Facial expressions as predictors of distal outcomes. Several studies have linked facial expressions with outcomes later in life (e.g., Harker & Keltner, 2001;Mueller &

Mazer, 1996). For example, Harker and Keltner (2001) had respondents rate women's college yearbook photos in terms of positive emotion. Observers thought that women who displayed more positive emotion would be more favorable on several personality dimensions and that interactions with them would be more rewarding. When Harker and Keltner examined the relationship between displays of positive emotion and actual life outcomes, they found that positive emotion predicted favorable outcomes in marriage and personal well-being up to 30 years later. Their findings suggested that facial expressions of emotion related to personality.

In terms of long-term performance, Mueller and Mazer (1996) studied facial dominance in West Point cadets as a predictor in military rankings. Undergraduate students viewed graduation portrait photos of 334 West Point graduates and then rated the graduates on a seven-point scale from dominant to submissive. The ratings correlated with promotions late in the graduates' careers but not with military rank midcareer.

I have discussed the function emotion performs in communication and reasoning. I have discussed also the process through which emotion spreads (contagion). However, in order to understand the role emotion plays in the relationship between a CEO and a subordinate, I must now discuss leadership.

Leadership

  Leadership research background. Leadership research in psychology began in the early 1900s with trait studies (Yukl & Van Fleet, 1992). Trait researchers sought to identify physical characteristics or psychological traits that separated nonleaders from leaders or good leaders from poor leaders (Barling, Christie, & Hoption, 2011). Researched traits included height, physical appearance, gender, authoritarianism,

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intelligence, and self-confidence (Barling, Christie, & Hoption, 2011). Trait research dominated leadership research through the 1940s. However, no traits that predicted leader emergence or effectiveness materialized. So, in the 1950s researchers expanded their search for leadership explanations to leader behaviors (Barling, Christie, & Hoption, 2011).

Early leader behavior studies supported the link between leadership and group performance. Two sets of studies at Iowa State and Ohio State University pioneered the leadership behavior research. The Iowa State "Boys' Studies" indicated that leadership style influenced group attitudes and performance (Lewin, Lippit, & White, 1939). Similarly, the Ohio State University studies identified two types of leader behavior, consideration and initiating structure, that influenced subordinate attitudes and performance (Stogdill & Coons, 1957).

Critics of behavioral theories noted that they did not account for situational factors (Barling, Christie, & Hoption, 2011). In response to these critiques researchers developed contingency theories. Fiedler (1967) developed the first model, the Contingency (LPC) Model. In Fiedler's model, a leader either had a trait-based task-orientation or a trait-based relationship-orientation (Podsakoff & House, 1994). Task-orientation and relationship-orientation were very similar to the structure and consideration concepts that Lewin, Lippit, and White (1939) developed (Barling, Christie, & Hoption, 2011). Fiedler used the Least Preferred Coworker Scale to measure a leader's traits. A leader's traits interacted with situational characteristics to determine leader effectiveness. This scale measured the quality of the leader's relationship with the least preferred coworker to determine leadership traits. A situation had three defining

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characteristics: *(a)* leader-follower relations (good versus bad), *(b)* performance goal clarity (structured versus unstructured), and *(c)* a leader's formal authority or power (high versus low) (Barling, Christie, & Hoption, 2011; Podsakoff & House, 1994). Fiedler created eight different scenarios based on the possible combinations of traits and situational factors (Barling, Christie, & Hoption, 2011).

Following Fiedler, several other researchers developed their own contingency models (Barling, Christie, & Hoption, 2011). Most notably, House (1971) developed the path-goal leadership theory, and Kerr and Jermier (1978) developed substitutes for leadership theory. House's (1971) path-goal theory was similar to Fiedler's model in its objectives. It identified the role and behaviors of effective leaders and explored the situational characteristics that modified those behaviors (Barling, Christie, & Hoption, 2011). According to the path-goal model, a leader aimed to align the goals of his followers with the goals of the organization and then showed followers how his leadership could help them to achieve the goals (Barling, Christie, & Hoption, 2011; Podsakoff & House, 1994). Kerr and Jermier (1978) further downplayed the role of leader with their substitutes for leadership theory. In this theory, organizational, group, task, and individual factors explain organizational outcomes more so than leadership (Kerr & Jermier, 1978). These factors could serve as substitutes (replacing leadership) or neutralizers (counteracting the effect of leadership) (House & Podsakoff, 1994). Contingency theories attempted to explain the inconsistent findings in behavioral research. They added a new and important perspective to leadership research even though they took away emphasis from the leader.

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Vroom, Yetton, and Jago (1973) took a different perspective on leadership and situations with their normative decision theory. Unlike predecessors, they developed a model of leaders' cognitive processes. The normative decision theory modeled five types of decision-making procedures that leaders used. It also proposed the situations in which each type of decision-making procedure would be most effective (Yukl & Van Fleet, 1992). This theory, despite flaws, provided a unique perspective on leadership and inspired future researchers (Yukl & Van Fleet, 1992).

Contingency researchers, leader behavior researchers, and leader trait researchers attempted to explain leadership in different ways. They all, however, had the same underlying assumption that leaders developed homogenous relationships with their subordinates called an "average leadership style" (Martin, Epitropak, Thmas, & Topakas, 2010). Dansereau, Graen, and Haga (1975) challenged the average leadership style view with the leader-member exchange model. This model, unlike previous models, dictated that leaders have different types of relationship with each of their subordinates rather than an average leadership style that they use with all subordinates. A leader typically has close relationships with members of a smaller group of subordinates referred to as "the in-group." The in-group typically has more contact with the leader and might influence the decision-making process. All other subordinates fall into the "out-group." Research has related in-group membership with many organizational outcomes such as subordinate turnover (Graen, Liden, & Hoel, 1982), subordinate satisfaction (Graen, Novak, & Sommerkamp, 1982; Graen, Orris, & Johnson, 1973; Scandura & Graen, 1984), and promotions (Dansereau, Graen, & Haga, 1975). The leader-member exchange measures a leader's effectiveness through the quality of his relationships. Dansereau, Cashman,

and Graen theorized that a leader with high quality relationships with his subordinates would be effective (Bauer & Green, 1996). This model was the first to examine how individual leader-member relationship quality could impact outcomes in organizations (House & Podsakoff, 1994).

Although groundbreaking, these behaviorally focused theories seldom accounted for more than about 12% of the variance in dependent variables, so researchers sought new explanations (House & Podsakoff, 1994). In the 1970's research delved more deeply into affective consequences of leadership. In 1978, Burns created a framework for a leadership style called transformational leadership. Transformational leadership theories built onto the idea of the relationship between a leader and her followers introduced in the leader-member exchange theory (Avolio, Sosik, Jung, & Berson, 2003). Burns established two leadership concepts: transformational leaders and transactional leaders. Transformational leaders led by transforming their followers' beliefs and expectations. A successful transformational leader led followers to sacrifice self-interest for the sake of the organization. In contrast, transactional leaders led by using incentives and/or punishments to encourage desired behaviors. Followers of a transactional leader performed desired behaviors without necessarily internalizing the goals of the larger organization (Barling, Christie, & Hoption, 2011). Bass later added to Burns' concept by defining three types of transformational leadership behaviors: inspirational motivation, intellectual stimulation, and individualized consideration. Previous research models had ignored leader influence on followers. Transformational leadership's behavioral definitions defined leadership through its effects on followers for the first time (Yukl & Van Fleet, 1992).

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In addition to transformational leadership, charismatic leadership theory took into account followers' perspectives. Max Weber first wrote of charismatic leadership theory in the 1920s, but it did not become known in the United States until Weber's work was translated into English in the 1940s (Barling, Christie, & Hoption, 2011). Charismatic leadership theory represents a major attempt to explain a certain type of leader, who inspires followers. Similar to transformational leadership, Weber used the followers' perceptions to define charisma. According to Weber, the followers' belief that the leader possessed unusual and exceptional qualities characterized charisma (Barling, Christie, & Hoption, 2011). Additionally, charismatic leaders, like transformational leaders, inspire followers to sacrifice their self-interests for the sake of the group (Avolio et al., 2003). Several interpretations of this theory have surfaced. Two, however, have been most prominent. First, Conger and Kanungo (1998) used the attributions that followers make about their leader to measure charisma. Second, House (1977) used actual leader behaviors as measures of charisma (Barling, Christie, & Hoption, 2011).

The similarities between transformational leaders and charismatic leaders have led to confusion among researchers (Yukl & Van Fleet, 1992). In an attempt to clarify, Bass differentiated transformational leadership from charisma by characterizing charisma as an unnecessary component of transformational leadership (Yukl & Van Fleet, 1992). Three different behaviors characterize transformational leadership: inspirational motivation (charisma or the process through which a leader inspires by raising strong emotion in followers), intellectual stimulation (a leader inspires followers to challenge previously accepted ideals), and individualized consideration (leaders develop and treat followers as individuals) (Bass, 1985). Follower empowerment also differentiates

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charismatic from transformational leaders. Transformational leaders seek to empower followers to think for themselves whereas charismatic leaders do not necessarily aspire to do this. Instead, charismatic leaders might seek to inspire personal loyalty rather than loyalty to the group's cause (Yukl & Van Fleet, 1992).

Transformational and charismatic leadership theories' new focus on the follower inspired researchers to focus not only on behaviors relating to transactional leadership such as support (House, 1971) or reinforcement (Ashour & Johns, 1983; Sims & Szylagyi, 1975) but also to examine how leaders can influence followers' emotions and cognitions. Transformational and charismatic theories described how leaders reached followers on an emotional level in order to transform the organization. This stimulated research in new leader behaviors, such as non-verbal communication (House & Podsakoff, 1994). Transformational and charismatic leadership theories were the first to examine emotional consequences of leadership and to examine nonverbal communication as a leader behavior.

Transformational leadership researchers broke from previous work by highlighting the follower in the leader-follower relationship. Transformational leadership theories, however, did not define the mechanism through which leaders transform followers (Podsakoff & House, 1994). This gap in theory, combined with more reliable measures of personality, made room in leadership research for the reemergence of trait theories. By the 1990s researchers had developed the Big Five Factors of Personality (Extraversion, Conscientiousness, Neuroticism, Openness to Experience, and Agreeableness). This measure divided personality into five distinct factors that researchers had found both reliable and valid (McCrae & John, 1991). Using this

measure, modern trait researchers have had success linking leader personality traits with leadership outcomes (e.g., Judge et al., 2002; Judge, Bono, Illies, & Gerhardt, 2002).

Leader influence on individual-level behaviors. Researchers have found that leaders influence a wide variety of individual outcomes in the workplace including turnover intentions (e.g., Venkataramani, Green, & Schleicher, 2010), job satisfaction (e.g., Erdogan & Bauer, 2010), performance (e.g., Wayne et al., 2008), group member cooperation (De Cramer, van Dijke & Mayer, 2010), and organizational commitment (e.g., Eisenberger, et al., 2010). Currently, researchers most often have examined the leader-member exchange and transformational leadership models in the workplace.

The leader-member exchange relationship and individual-level performance.
Researchers have found the leader-member exchange relationship related to many individual-level workplace outcomes (Eisenberger, et al., 2010; Erdogan & Bauer, 2010; Venkataramani, Green, & Schleicher, 2010). For instance, the quality of leader-member exchange relationships has a negative relationship with turnover intentions (Venkataramani, Green, & Schleicher, 2010) and a negative relationship to withdrawal behaviors when the justice climate is low (Erdogan & Bauer, 2010). Additionally, researchers have found that leader-member exchange has a positive relationship with organizational commitment (Eisenberger, et al., 2010) and job satisfaction (Erdogan & Bauer, 2010; Venkataramani, Green, & Schleicher, 2010). Job satisfaction can mediate the relationship between leader behaviors and certain work behavioral outcomes such as turnover (e.g., Erdogan & Bauer, 2010; Venkataramani, Green, & Schleicher, 2010). These findings support that leader-member exchange relationship quality is one of the antecedents to job performance.

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Transformational leadership and individual-level performance. Besides the leader-member exchange model, researchers have related the transformational leadership model to individual-level performance (Podsakof, MacKenzie, & Bommer, 1996; Wang & Howell, 2010). Podsakoff, MacKenzie, and Bommer (1996) examined transformational leadership behavior's relationship with many workplace outcomes that are antecedents of individual-level performance in the workplace. They found that transformational leadership related to general satisfaction, organizational commitment, trust in the leader, role clarity, and role conflict. Similarly, Wang and Howell (2010) found that transformational leadership at the individual-level was positively associated with task performance and personal initiative.

The relationship between individual-level performance and organization-level performance. Leader influence on performance at the individual level does not necessarily support leader influence on performance at the organization level. However, researchers have found that aggregated employee attitudes and behaviors related to organizational performance (e.g., Estes & Wang, 2008; Wang, Tsui, & Xin, 2011). Wang, Tsui, and Xin (2011) found that combined employee attitudes mediated the relationship between CEO behavior and organizational performance. In addition to combined attitudes, combined individual-level performance relates to organization-level performance. Estes and Wang (2008) found that workplace incivility directed toward individuals could have organization-level effects on performance. The effects of incivility reduced the performance of multiple individuals and with their combined reduction in performance organization-level performance suffered. This evidence

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suggests that through individual relationships, a CEO can influence organization-level performance.

Leader impact on organizational-level performance. The link between leaders and organizational performance remains contentious (Thomas, 1988). In 1972 Lieberson and O'Connor found that leaders account for very little variance in organizational performance. They concluded that leadership did not matter for organizations and called for a moratorium on leadership research at the organizational level. Their study polarized the organizational research community between supporters (Pearce, Stevenson, & Perry, 1985; Pfeiffer & Salancik, 1978) and critics (Aldrich, 1979; Hambrick & Mason, 1984; Weiner, 1978) of their findings.

Hambrick and Mason (1984) conducted a replication study and supported Lieberson and O'Connor's results. The conclusions of the two studies supported the sentiments of the individual-level leader-performance researchers at the time. The individual-level researchers were dissatisfied with previous research findings and were developing models that downplayed the role of leadership in the leadership-performance relationship. Therefore, Lieberson and O'Connor's (1972) conclusions remained unchallenged until Thomas (1988) found in a study of UK retail firms that leadership does make a difference when properly controlling for contextual variables. Since Thomas's study, more researchers have begun examining the relationship between CEOs and organization-level performance (e.g., Ling et al., 2008; Manner, 2010; Martinez-Campillo & Fernandez-Gago, 2011; Peterson et al., 2003). These researchers have found that CEO characteristics and behaviors do relate to organizational performance.

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Later researchers suggested context as a moderating factor on leader influence on performance (e.g., Ling et al., 2008). Ling et al. (2008) found evidence of contextual influence when they examined the relationship between transformational CEOs and performance in small- to medium-sized firms. They found that firm complexity, an environmental characteristic that determines how much direct influence a CEO has, moderated the relationship between CEO transformational leadership level and organizational performance. In order to control for this, I am using organization size as a substitute for firm complexity.

Transformational leadership and organizational performance. Transformational leadership researchers have had mixed results when relating their leadership model that is predictive of individual-level performance to organization-level performance (Ling et al., 2008). Many researchers have failed to relate transformational leadership behavior with organization-level performance (Agle et al., 2006; Ensley, Pearce, & Hmieleski, 2006; Tosi, Misangyi, Fanelli, Waldman, & Yamarino, 2004; Waldman, Ramirez, House, & Puranam, 2001). Studies of large corporations have not supported a link between transformational leaders and organizational performance (Agle et al., 2006; Ensley, Pearce, & Hmieleski, 2006; Tosi, Misangyi, Fanelli, Waldman, & Yamarino, 2004; Waldman, Ramirez, House, & Puranam, 2001). Those studies with results that did support a link between transformational leadership either failed to consider some important variables (e.g., Baum, Locke, & Kirkpatrick, 1998) or had flawed methods (e.g., Waldman, Javidan, & Varella, 2004).

Recent researchers, however, have found evidence that transformational leadership behaviors relate to organization-level performance (Martinez-Campillo &

Fernandez-Gago, 2011). For instance, Martinez-Campillo and Fernandez-Gago (2011) found that management style of the CEO influenced the relationship between firm performance and type of diversification strategy. In this study, companies with self-serving CEOs did not perform as well as companies with CEOs that behaved in a pro-organizational manner (a characteristic of transformational leaders; House & Podsakoff, 1994). Similarly, Ling et al. (2008) found that CEO displays of transformational leader behaviors had a positive relationship with organization-level performance in small and medium sized firms. Examining performance from a different perspective, Jung, Chow, and Wu (2003) found that transformational leadership had a positive relationship with organizational innovation. Therefore, despite previously failed attempts, the relationship between individual-level performance and organization-level performance looks promising.

Upper echelons model. In addition to empirical research, Hambrick and Mason (1984) proposed a theoretical concept that supports the relationship between leader behavior and organization-level performance. In their Upper Echelons Model, Hambrick and Mason (1984) proposed that CEOs face complex situations that are not knowable. In this model, CEOs' demographic profiles, which include executives' experiences, values, and personalities, influence how they interpret situations and, consequently, the choices they make in those situations. In line with this theory, researchers have found that demographic profiles of executives are related to strategy and performance outcomes (Boeker, 1997; D'Aveni, 1990; Eisenhardt & Schoonhoven, 1990).

Several researchers using the Upper Echelons Model have related CEO characteristics (Manner, 2010) to organizational performance. Manner (2010) found that

CEO characteristics related to corporate social performance in 650 public U.S. firms. Similarly, Peterson et al. (2003) found that the personality of CEOs influenced top management teams and through them influenced organization-level income growth. These studies demonstrate that leader characteristics relate to the performance of an entire organization.

Emotion in the Workplace

Now that I have discussed both emotion and leadership, I must continue with the discussion of emotion in the workplace. This line of research examines the influence of emotions within the workplace context. Understanding the influence of emotions in the workplace context will further illuminate the connection between CEO emotion and organization-level performance.

History of research in workplace emotion. In 1915, Hugo Munsterberg first discussed the idea of job satisfaction with his idea that motivation to work arose from its "value of satisfaction" (p. 130). According to Munsterberg, workers maintained a balance between their disagreeable sensations and their sources of pleasantness, and if the disagreeable sensations began to outweigh the pleasantness, a worker gave up his work (Schleicher, Hansen, & Fox, 2011). Munsterberg thought that all business life should focus on maintaining the strength of the pleasant feelings over the unpleasant feelings. In 1920, Walter Dill Scott echoed Munsterberg's idea of focusing on worker feelings by praising researchers' recognition of workers' emotions and sentiments. Scott illustrated his point with a situation from a business executive who had provided a large cash bonus to his employees as a reward for good their work. Instead of reacting happily, the employees felt offended by the reward process (Schleicher, Hansen, & Fox, 2011).

In the 1920's researchers began to notice and study seemingly paradoxical situations such as on the one Scott referenced (Schleicher, Hansen, & Fox, 2011). Affect in the workplace emerged from these early studies as a distinct field in the 1930's (Brief & Weiss, 2002). During the 1930's researchers studied a variety of affect-work environment relationships: efficiency and attitudes (Kornhauser & Sharp, 1932), daily affect levels and daily performance levels, emotional lives at home and work behaviors (Hersey, 1932), factors influencing job satisfaction (Hoppock, 1935), and workplace social interaction and performance (Roethlisberger & Dickson, 1939). These studies involved a variety of innovative techniques (Brief & Weiss, 2002). Researchers used methods such as case studies, surveys, repeated measures design, and interviews to infer the influences and effects of employee affect. The researchers observed many affect influences, which are still relevant in today's research. For instance, researchers linked affect with personality, home lives, and elements of the work environment (e.g., supervision and the workplace's social organization; Brief & Weiss, 2002). They also hypothesized about the relationship between affect and productivity with mixed results (Brief & Weiss, 2002).

After the 1930's, however, the interests of researchers examining affect in the workplace narrowed and the use of paper and pencil measures became standard (Brief & Weiss, 2002). This constriction of research methods had several implications for the study of affect in the workplace: *(a)* researchers limited affect at work almost exclusively to job satisfaction; *(b)* researchers mainly ignored methods other than paper questionnaires, such as clinical or qualitative methods; *(c)* researchers focused on observables at the expense of theoretical development; *(d)* researchers examined the

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work environment for causes of job satisfaction while ignoring dispositional and extra-work factors (Brief & Weiss, 2002).

Until the 1980's researchers focused on the use of paper-and-pencil measures and understanding aspects of the work environment that influenced job satisfaction. Despite the narrowness of research interests, the field of emotion research advanced with the differentiation of "moods" and "emotions" (Brief & Weiss, 2002). Baritz (1960) speculated that advances in attitudinal measures might have influenced the reliance on surveys, and the desire to help management might have influenced the preoccupation with aspects of the work environment. Whatever the reason, researchers continued this narrow stream of research on job satisfaction and generated over 10,000 studies (Spector, 1996).

The work of these researchers continues to influence current research on job satisfaction. Current researchers still widely use paper and pencil measures. Similar to measures prior to 1980, the measures of affect that researchers use measure attitudes toward events or people rather than emotions (Brief & Weiss). Research using paper and pencil surveys in which participants respond using words have a limited ability to measure emotion. Emotion is a fleeting state directed toward a specific object that might or might not include a cognitive component (Keltner, 1996). Attitudes are sentiments with cognitive, emotional, and behavioral components toward a particular object that endure over time. When researchers ask about a participant's feeling toward a particular object that the participant has experience with over time (such as how an employee feels about his job), the participant's response includes the cognitive and emotional

components of his attitude about that object. This type of measure leaves room for more precise measures of emotions in the workplace.

Despite these imprecise measures, organizational researchers have identified several non-mutually exclusive categories of antecedents to workplace moods and emotions: stressful events (or aversive stimuli), workgroup characteristics, physical settings, organizational rewards and punishments (Brief & Weiss, 2002), and leaders (e.g., George, 2000). According to Brief and Weiss (2002), researchers' emphasis on mood states over discrete emotions has limited the research on affect in the workplace. The models of positive and negative states do not have enough depth to fully explain the complexity of emotional experiences and their consequences in the work setting.

According to Ashkanasy and Ashton-James (2005), Organ and Near (1985) and Brief and Roberson (1989) championed this movement by being the first researchers to state that job satisfaction differs from affect. Following their lead, Weiss and Cropanzano (1996) published their Affective Events Theory. The Affective Events Theory proposed that *(a)* an employee's feelings determine her work behavior, *(b)* the workplace environment generates those feelings through discrete "affective events", and *(c)* the employee's emotional responses determine her attitudes and behaviors (Ashkanasy & Ashton-James, 2005). Therefore, research on the role that discrete emotions play in the work setting could help balance this stream of research and help further understanding of the role emotion does play overall in the workplace.

Ashkanasy (2003a) took this idea further in developing a multilevel model of emotions in organizations. This model highlights the role of emotion in cognition. In level 1 of the model Ashkanasy describes the with-in person neuropsychological

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processes through which emotion manifests and shapes cognitive functioning (Ashkanasy, Hartel, & Zerbe, 2000). They propose that affective reactions are largely subconscious and out of an individual's control. With this proposition, frequent small events (such as daily manager interactions) should have more impact on attitudes and behaviors than infrequent, intense events (Diener, Smith, & Fujita, 1995).

The model contains five levels of analysis: (1) with-in person, (2) between persons, (3) interpersonal relationships, (4) groups, and (5) the organization as a whole (Ashkanasy, 2003a). The model implies that in order to interpret organizational emotion as a whole, a researcher must examine it through the context of face-to-face interactions (Askhkanasy, 2003a).

Emotion influence on behavior in the workplace. Affective states can influence many individual-level performance-relevant outcomes including judgments (Robbins & DeNisi, 1994, 1998; Varma et al., 1996), creativity (Isen, 1999, 2001), helping behavior (Isen & Baron, 1991), general performance (e.g., Staw & Barsade, 1993), turnover intentions (George, 1989), citizenship behavior (Ilies, Scott, & Judge, 2006), and risk taking (Brief & Weiss, 2002). For example, Nyberg (2010) found in his study of 12,545 insurance employees over three years that job satisfaction mediated the relationship between performance and voluntary turnover. Other researchers have found a positive relationship between dispositional affect and performance (Staw & Barsade, 1993) and between dispositional affect and citizenship behavior (Ilies, Scott, & Judge, 2006). Additionally, in a meta-analysis, Harrison, Newman, and Roth (2006) found that overall job attitude (a composite of job satisfaction and organizational commitment) predicted focal performance, contextual performance, lateness, absence, and turnover.

The relationship between emotion and employee behavior supports the importance of examining emotional antecedents in the workplace. Given that emotions relate to behavior, it is important to understand how to influence them.

Impact of feelings toward a leader on employee performance. The way a leader makes a subordinate feel can influence individual-level performance (Bryne et al., 2011; Burton, Lauridsen, & Obel, 2004; DeConinck & Johnson, 2009) and individual perceptions of the workplace (Cole, Bruch, & Vogel, 2006). Cole, Bruch, and Vogel (2006) examined the relationship between employees' emotions and their perceptions of the workplace. They examined two relationships, one between supervisor support and cynicism and one between employee psychological hardiness and cynicism. They found that employees' positive and negative emotions mediated both relationships.

Bryne et al., (2009) also found that employees' feelings toward their manager had an impact on work outcomes. In their study, managerial trustworthiness positively influenced individual-level job performance. In another study, Burton, Lauridsen, and Obel (2004) found that leader credibility, as an aspect of organizational climate, had a positive relationship with organizational performance in small and medium-sized companies in the UK. Additionally, DeConinck and Johnson (2009) found that perceived supervisor support had a positive relationship with salesperson performance. These studies demonstrate that how employees feel toward their leader influences work outcomes.

Leader emotion influence on subordinate emotions and behaviors. As one of several non-mutually exclusive categories of antecedents to workplace moods and emotions (Brief & Weiss, 2002), leaders have the ability to influence subordinate affect.

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Specifically, the emotions leaders communicate to their subordinates influence subordinate affect (Lewis, 2000b; McHugo, et al., 1985; Tiedens, 2001). For example, when participants viewed video footage of former US President Ronald Reagan, they exhibited changes in skin conductance and heart rate in reaction to the former president's expressions of anger, happiness, or fear (McHugo, et al., 1985). Additionally, people perceive leaders who display pride when things go well as opposed to gratitude as more powerful (Brief & Weiss, 2002). Moods typically spread from higher status individuals to lower status individuals rather than vice versa (Anderson et al., 2003), and this mood can affect the affective tone of an entire group (Sy, Cote, & Saavedra, 2005). This aligns with the research on emotional contagion and explains how a leader can affect his immediate work group.

Emotion cycle research. These links between leader emotions and subordinate performance indirectly support the relationship between leader facial expressions (as sign of emotion) and organization-level performance. Hareli and Rafaeli (2007) have developed a theoretical model directly relating a leader's emotion to the performance of an entire organization. Unlike, Ashkanasy's model, however, they do not include cognition, but focus instead on how emotion spreads. They theorized that organizations have "emotion cycles" and that these cycles transcend dyads to affect the overall organization. Emotion would transcend dyads to an organizational level through the emotional contagion process (Hatfield, Cacioppo, & Rapson, 1994). This process would resemble the spread of a virus, affecting more and more people. Through this process the leader's interactions with a few subordinates could influence the entire organization.

Leader Facial Expressions and Organization-Level Performance

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Previous researchers have found direct links between leader faces and organization-level performance. In his book *Emotionomics* (2010)*,* Dan Hill links positive emotion facial expressions of Fortune 500 CEOs and stock performance. He examined the facial expressions of two CEOs, Carly Fiorina of Hewlett-Packerd and John Chambers of Cisco. Hill found that Fiorina, whose company's stock price dropped 50 percent while she ran it, displayed the lower percentage of positive emotions compared to Chambers. This study inspired further investigation into the relationship between CEOs' emotional expressions and their companies' organization-level performance.

Rule and Ambady (2010) also found a relationship between organization-level performance and leader facial expressions. They, however, examined not only the relationship between a leader's face and organization-level performance but also the stability of perceptions of the leader's face over time. Rule and Ambady (2010) had undergraduates rate the undergraduate yearbook photos of the managing partners of America's top 100 law firms on levels of warmth and power. They also had separate groups of undergraduates rate the managing partners' current photos on those same categories. They found that power had a significantly positive relationship with profit margin and profitability index and that warmth had a significantly negative relationship with profit margin. This study is an example of how leader facial expressions can relate to organization-level performance. However, the validity of the composites created for warmth and power are suspect.

The Peyton-Steele-Johnson Model of Emotions in Organizations

Because day-to-day events subconsciously influence job satisfaction and the affect of a leader influences the organizational affect through the "emotion cycle,"

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measuring the leader's everyday emotional displays, particularly facial expressions, can provide a measure of organizational satisfaction that can be used to predict organizational performance. Below I propose a conceptual model relating specific leader emotions will influence behavior.

Leader anger. In one study, a leader's expressions of anger caused observers to feel more nervous and less relaxed than observers watching a leader either expressing sadness or no emotion (Lewis, 2000b). Additionally, people perceived leaders who displayed anger as more powerful than leaders who displayed sadness (Tiedens, 2001). Supporting these findings, Keating et al. (1977) found that observers judged posed photographs of models as dominant significantly more often when the models had lowered rather than raised eyebrows (Keating et al., 1977). According to the FACS manual (Ekman, Friesen, & Hager, 2002), the action unit 4, which lowers the brows, is involved in every combination of action units that commonly signals anger. Therefore, a person displaying anger would have lower brows. Perceptions of leader power are positively related to performance at both the individual- (Rahim, Antonioni, & Psenicka, 2001; Mueller & Mazer, 1996) and organization-levels (Rule & Ambady, 2010) of performance. I propose that leader expressions of anger have a positive relationship with organization-level performance.

Hypothesis 1: Anger displayed by CEOs will positively relate to organization-level performance.

Leader sadness. Observers felt less enthusiasm and more fatigue when observing a leader expressing sadness than when observing a leader expressing anger or no emotion (Lewis, 2000). Enthusiasm is positively related to individual-level

performance (Boehm & Lyubomirsky, 2008; Rego & Pina e Cunha, 2008), and fatigue is negatively related to individual-level performance (Ricci et al., 2007; Rosekind, et al., 2010). Additionally, sadness is negatively related to leader perceptions of power (Tiedens, 2001). Perceptions of leader power are positively related to performance at both the individual- (Rahim, Antonioni, & Psenicka, 2001) and organization-levels (Rule & Ambady, 2010). Overall, I propose that a leader's expressions of sadness will be negatively related to organization-level performance.

Hypothesis 2: Sadness displayed by CEOs will have a negative relationship with organization-level performance.

Leader happiness. Given that leaders typically transfer emotions to subordinates and not vice-versa (Anderson et al., 2003), leaders displaying more positive emotions should have happier and, therefore, more satisfied subordinates. Boehm and Lyubomirsky (2008) found that worker happiness related to workplace success. Researchers have also found that job satisfaction is negatively related to turnover intention (Cote & Morgan, 2002). Additionally, job satisfaction was positively related to organization-level financial performance (Schneider, et al., 2003) and organizational citizenship behaviors (Rego, Ribeiro, & Cunha, 2010). I propose that leader displays of happiness will be positively related to organizational performance.

Hypothesis 3: Happiness displayed by CEOs will have a positive relationship with organization-level performance.

Leader emotional sincerity. Not only the type of emotion displayed but also the sincerity of the emotion could have an impact on organization-level performance. Previous researchers have found that congruence between the upper and lower facial

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hemispheres is correlated with experiencing displayed emotion (Ekman, Friesen, & O'Sullivan, 2005). Researchers have found, however, that observers find cues on the lower face more important when detecting emotion (Calvo and Nummenmaa, 2008). Additionally, observers perform poorly at detecting true and faked emotion. For example, Krunhuber and Manstead (2009) found that observers had difficulty discriminating between Duchenne, or spontaneous smiles, and posed smiles. Despite this difficulty in detecting faked emotion, the communication of true versus faked emotions might influence workplace outcomes.

Despite this inability to detect faked emotions, at least consciously, Glaso and Einarsen (2008) found that the frequency with which leaders suppressed or faked their emotions (instead of expressing their true emotions) was negatively related with the leader-member exchange relationship and job satisfaction and positively related to health complaints in both leaders and subordinates. Through factors such as leader-subordinate relationship quality and job satisfaction, the authenticity of leader emotional expression can influence work outcomes. I propose that leader emotional sincerity will have a positive relationship with organizational performance.

Hypothesis 4: Emotional sincerity displayed by CEOs will have a positive relationship with organization-level performance.

Leader emotion intensity. Leaders influence subordinate perceptions not only by the types of emotion displayed but also by the amount of emotion displayed. Displaying either too little or too much emotion can lower a speaker's credibility (Golding, Fryman, Marsil & Yozwiak, 2003). Leader trustworthiness is positively related to individual-level job performance (Bryne et al., 2009; Burton, Lauridsen, & Obel, 2004). I propose that a

leader's moderate emotional displays will have a positive relationship with organization-level performance.

Hypothesis 5: Emotional intensity displayed by CEOs will have a curvilinear relationship with organization-level performance.

Leader expressive style. Stable affective tendencies influence an individual's "expressive style" (Magai & McFadden, 1995; Malatesta, 1990). This means that emotional expressions can indicate personality and might remain consistent over time (Keltner, 1996).

Hypothesis 6: The amount of anger, happiness, sadness, number of AUs per event, and mean emotional intensity displayed by CEOs will remain consistent over time.

Method

Main study overview

I examined four videoed speaking engagements of 50 CEOs from 50 companies for CEO facial expression. In gathering the videos, I used only Fortune 500 companies because it enabled me to access financial information such as revenue and profits which I needed to examine my hypotheses organization-level performance. I analyzed only male CEOs. This reduced differences that could exist in displayed emotion between male and female CEOs. Additionally, the CEOs must have been in their current positions since at least 2007. Hambrick and Mason (1984) suggested CEO leadership takes time to impact performance. I collected videoed speaking engagements from each CEO conducted during 2007 through 2011. I collected a video recorded during at least two different years for each. These diverse time points were necessary in the examination of CEO emotional display and facial expressiveness consistency over time.

Control variables

In order to accurately examine the amount of unique variance that leadership explains in organizational-performance, I had to control for two variables: industry and company size. After controlling for these variables, I could more accurately examine the selected financial predictors.

Company size. I operationalized company size in two ways: net worth and number of employees. I calculated net worth of a company by taking total assets and subtracting total liabilities. This measure took into account all of the money invested

since the company's inception as well as the retained earnings during its years of operation; therefore, it served as a reliable measure of a company's investment history (Investorwords.com). I measured net worth as a continuous variable. I obtained this information via public company records such as annual reports. I used the number of employees, measured as a continuous variable, including the entire range of individuals that the organization employs. I obtained this information via public company records such as company websites or published employment statistics. The company size used was consistent with the time period from which the financial data came.

Industry. I defined industry using a categorical variable obtained from the North American Industry Classification System (NAICS) codes (similar to Chatterji, Levine, & Toffel, 2009). The NAICS codes categorize companies according to industry (http://www.census.gov/eos/www/naics/). In order to control for industry, I obtained NAICS industry averages of my selected financial statistics. I provided a list of NAICS codes in Appendix A. Then I group mean centered each financial statistic, grouping the companies by industry.

Study Variables

Organization-level performance. I measured organization-level performance using the financial metrics Return on Assets (ROA) and Return on Equity (ROE). In the private sector financial data can serve as an accurate measure of organizational-level performance (Andrews & Boyne, 2010; Collins, 2001). Return on Assets (ROA) is defined as a company's "net income divided by total assets," (Emery, 1998, pp. 46). Return on Equity (ROE) is defined as "net income divided by common equity or net

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worth," (Emery, 1998, pp. 45). I benchmarked all financial data, which means I standardized all financial information by industry-type.

Display of Emotion. In this study I operationally defined *display of emotion* as facial expressions coded using the Facial Action Coding System.   Paul Ekman, with the help of others (Ekman & Friesen, 1978; Ekman, Friesen & Hager, 2002), developed a comprehensive system for measuring facial expressions called the Facial Action Coding System (FACS). The face can move in 44 unique ways. Each of these movements is called an Action Unit (AU). AU's by themselves or in combinations form facial expressions, called "events," (Rosenberg, 2005). Each AU has an onset (when the muscle first begins to move), an apex (when the muscle reaches its maximum contraction for that event), and an offset (when the movement of the muscle ends for that event). Events are characterized as a single or multiple AUs acting under two conditions: 1) each AU has its onset before any one of the group of AUs has reached its apex, and 2) all of the AUs are at apex at the same time. In addition to measuring which AUs are acting, FACS measures how large the movement is on a 5-point ordinal scale (A-E). Coding facial movement takes approximately 100 minutes for every one minute of behavior that I will code. All coders were certified FACS coders.

Anger. I defined power as expressions of anger. According to the FACS manual, anger is indicated by AUs 4, 5, 7, 10, 22, 23, 25, and 26; AUs 4, 5, 7, 10, 23, 25, and 26; AUs 4, 5, 7, 23, 25, and 26; AUs 4, 5, 7, 17, and 23; AUs 4, 5, 7, 17, and 23; AUs 4, 5, 7, and 23; and AUs 4, 5, 7, and 24. I counted the frequency of seconds during which CEOs display power emotion out of all total seconds coded during the speaking engagement.

Happiness. I defined happiness as displays indicated by the FACS coding system. According to the FACS manual a combination of AUs 6 and 12 at any intensity or AU 12 alone at the C/D intensity indicate happiness. I calculated the frequency of seconds during which CEOs display happy emotion out of all total seconds coded during the interview.

Sadness. I defined sadness as displays indicated by the FACS coding system. According to the FACS coding system sadness is indicated by a combination of AUs 1, 4, 11, and 15B with or without 54 and 64; AUs 1, 4, and 15 at any level with or without 54 and 64; and AUs 6 and 15 with or without 54 and 64. I calculated the frequency of seconds during which CEOs display sad emotion out of all total seconds coded during the interview.

Emotional sincerity. Emotional displays involving the upper regions of the face are more difficult to fake. Therefore, a match between the emotion signaled in the lower region of the face and the upper region of the face should communicate a more sincere emotion. I examined the degree to which the upper region of the face matches the lower region of the face both in terms of emotion displayed. Because happiness is the only discrete emotion that does not require upper and lower AUs for in combination for scoring, I used this emotional expression to examine sincerity. I operationally defined sincerity as the expression of AU 12 with AU 6.

Emotion intensity. I defined emotion intensity as the intensity of the action unit displayed. The intensities ranged from level A to level E. I transformed the alphabetic intensities to a numerical scoring system ranging from level 1 to level 5. I calculated the

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level of emotion intensity that a CEO used by taking the average of the intensity of the action units involved in emotional displays

Expressive Style. I defined expressive style as the consistency of the frequency of anger, sadness, and happiness as well as the consistency of the components of facial expression (mean intensity and mean number of AUs per event) expressed by a single CEO over time. I calculated this using the intra-member agreement index of the frequency of seconds where AUs used in each measured emotion (anger, sadness, happiness) were displayed out of all total seconds in a single a speaking engagement. To calculate consistency for the two facial expression components, I calculated the intra-member agreement index of the means of the two facial expression components (intensity, number of AUs per event) across speaking engagements.

Procedure

I obtained four publicly available videos of speaking engagements for each CEO from the Internet. Videos were selected to include a variety of time points, networks, and interviewers for each CEO. Videos were also selected only if their video quality and camera angle were sufficient for facial coding. After obtaining CEO speaking engagements, I reviewed the videos frame-by-frame in order to code facial movement. In order to randomize my coding selections, I went to the center of each video and coded ten seconds before the center and ten seconds after the center, coding 21 seconds in total per video. I skipped seconds in which the CEOs face was not visible. I selected video segments as close to the center of the video as possible, but favored 21 seconds of continuous facial video coverage and strayed from the exact center of videos in order to obtain a continuous segment.

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Next, the selected video segments were coded. Each minute of behavior that was coded took approximately 100 minutes to code. The AUs and AU intensities involved in each event were recorded. The duration of the AU to the nearest second was recorded as well. If a single second contained multiple events, then an event's duration within that second was recorded as one divided by the number of events within the second. For example, if a second contained the end of an apex and offset of one event and the onset and apex of another event, then each of those events would receive half a second in duration for that second.

Results

Sample

I removed one CEO from the analyses because one of his videos was a duplicate of a previous video. I removed one CEO from both the ROA and ROE analyses because his company's ROA and ROE were more than 5 standard deviations from the mean. Finally, I removed one CEO from only the ROA analyses because his company's ROA was more than 5 standard deviations from the mean. My final sample included 48 male CEOs from Fortune 500 companies in 36 different industries. I included 48 CEOs in the ROE analyses and 47 CEOs in the ROA analyses. Companies had an average of 94,326 employees (range: 3,639- 650,000 employees).

Data Preparation

Support for data aggregation. I first tested whether I was justified in aggregating the data from all four videos collected from a single CEO when examining components of facial expression (i.e., intensity and number of AUs per event). Examining the consistency of facial components over time was necessary for two reasons. First, finding consistency over time provides evidence of a trait-like expressive style. Second, I needed to compute a composite score of intensity in order to test Hypothesis 5 which examined the relationship between CEO facial expression intensity and organization-level performance. I calculated an intra-member agreement index (r_{wg}) for the each component of facial expression (i.e., mean number of AUs per event for each CEO and mean intensity level per video for each CEO). The mean correlation coefficient

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for mean number of AUs per event in each video (r_{wg} = .72) and mean intensity

level per video (r_{wg} = .80) supported aggregation across videos. Table 1 displays the

means, standard deviations, and intercorrelations between the facial expression

components, emotional displays, and the organization-level performance indicators.

Examination of potential violations of multi-level analysis assumptions.

Because financial performance from one year is likely to influence the following year's

financial performance, ROA and ROE likely violate the assumption of independence of

error assumption. Therefore, I used a repeated measures multivariate analysis of variance

which takes into account the relationships between the coefficients (Introduction to SAS).

I also checked for violations of the sphericity assumption and found that epsilon values

from each analysis were above the cutoff point recommended by (Kirk, 1995).

Therefore, I did not need to control for sphericity violations.

Financial data preparation. For my organization-level performance indicators,

ROA and ROE, I needed to control for industry type. In order to do this, I used the

industry averages of ROA and ROE based on the North American Industry Classification

System for each company. I then group mean centered the ROA and ROE values for

each company.

Table 1

Means, Standard Deviations, and Intercorrelations for all Variables

Variable	*n*	*M*	*(SD)*	1	2	3	4	5	6	7	8	9	10	11	12	13
Predictors																
1. Intensity	48	1.88	(0.45)	-												
2. AUs	48	1.20	(0.57)	-.14	-											
3. Happiness	48	9.14	(10.37)	-.20	.40*	-										
4. Brows	48	59.93	(21.74)	.01	-.37*	-.43*	-									
5. Sincerity	48	.31	(.47)	-.04	.33*	.53*	-.45*	-								
Outcomes																
6. ROA 2008	47	-0.13	(7.40)	-.28	.07	.03	.01	-.02	-							
7. ROA 2009	47	-1.75	(5.51)	-.17	-.06	.12	-.01	.04	.51*	-						
8. ROA 2010	47	0.80	(7.69)	-.22	-.22	.01	.27	-.08	.63*	.52*	-					
9. ROA 2011	47	0.65	(5.70)	-.18	.01	.26	.10	.15	.45*	.73*	.58*	-				
10. ROE 2008	48	-4.16	(8.49)	.04	-.11	.02	.03	.12	.55*	.56*	.58*	.71*	-			
11. ROE 2009	48	4.61	(15.50)	.05	-.06	-.12	-.11	-.09	.43*	.16	.08	.01	.45*	-		
12. ROE 2010	48	3.28	(18.69)	.11	.08	.15	.06	.09	.36*	.56*	.25	.34*	.46*	.20	-	
13. ROE 2011	48	7.45	(23.25)	.09	-.02	.02	.17	-.13	.26	.31*	.43*	.23	.30*	.09	.68*	-

Note. * denotes $p < .05$.

Hypothesis Testing

I tested Hypotheses 1, 2, and 3 by examining the number of seconds that AUs indicative of anger (Hypothesis 1), sadness (Hypothesis 2), and happiness (Hypothesis 3) appeared on each CEO's face across all videos. I used a repeated measures technique to examine how the amount of anger, sadness, and happiness displayed by a CEO related to organization-level performance over time. I regressed organization-level performance indicators ROA and ROE from four time points (2008 through 2011) on anger, sadness,

and happiness. I conducted this analysis once to examine emotion effects on ROA and again to examine emotion effects on ROE.

When testing Hypothesis 1, I found only one CEO who displayed anger. Therefore, I could not test this hypothesis. Because I partially based my hypothesis on a study that found a relationship between lowered brows and perceptions of leadership, I examined the relationship of lowered brows with ROA and ROE. Lowered brows did not explain a significant amount of variance in ROA over time [$F(1, 45) = .70, p > .05$] or ROE over time [$F(1, 46) = .25, p > .05$]. Table 2 displays the results. Hypothesis 1 was not supported.

When testing Hypothesis 2, I found only one CEO displaying sadness. CEOs also did not display a proxy AUs for sadness similar to using brow lowering as a proxy for anger in the Hypothesis 1 test. Therefore, I did not have sufficient data to test Hypothesis 2.

Table 2

ROA and ROE Regression on Lowered Brow

Variable	*df*	Pillai's Trace	*F*	*p*
ROA				
Between				
Low. Brows	1		.70	.41
Error	45			
Within				
Year	3	0.08	1.17	.33
Year X Low. Brows	3	0.13	2.05	.12
Error	43			
ROE				
Between				
Low Brows	1		0.25	.62
Error	46			
Within				
Year	3	.12	1.92	.14
Year X Low. Brows	3	.05	0.74	.54
Error	44			

Note. * denotes *p* < .05.

To test Hypothesis 3, I regressed ROA over time and ROE over time on displayed happiness. Displayed happiness did not predict significant variance in ROA [$F(1, 45)$ = .60, $p > .05$] or ROE [$F(1, 46)$ = .05, $p > .05$] over time. Table 3 displays the results. Hypothesis 3 was not supported.

Table 3

ROA and ROE Regression on Happiness

Variable	df	Pillai's Trace	F	p
ROA				
Between				
Happiness	1		0.60	.44
Error	45			
Within				
Year	3	0.14	2.25	.10
Year X Happiness	3	0.07	1.15	.34
Error	43			
ROE				
Between				
Happiness	1		0.05	.82
Error	46			
Within				
Year	3	0.34	7.42*	.00
Year X Happiness	3	0.06	0.92	.44
Error	44			

Note. * denotes $p < .05$.

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To test Hypothesis 4, relating sincerity of facial expressions to organizational performance, I grouped the CEOs into two categories, those who displayed happiness on both the upper and lower face and those who did not. I then dummy coded each CEO as either appearing sincere or not appearing sincere. Then I regressed ROA over time and ROE over time on the dichotomously coded groups. Appearing sincere did not explain significant variance in either ROA [$F(1, 45) = .01$, $p > .05$] or ROE [$F(1, 46) = .06$, $p > .05$). Table 4 displays the results. Results did not support Hypothesis 4.

Table 4

ROA and ROE Regression on Sincerity

Variable	df	Pillai's Trace	F	p
ROA				
Between				
Sincerity	1		0.01	.92
Error	45			
Within				
Year	3	0.18	3.19*	.03
Year X Sincerity	3	0.06	0.95	.43
Error	43			
ROE				
Between				
Sincerity	1		0.06	.81
Error	46			
Within				
Year	3	0.44	11.34*	.00
Year X Sincerity	3	0.12	1.91	.14
Error	44			

Note. * denotes $p < .05$.

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To test Hypothesis 5, I examined the curvilinear relationship between emotional intensity and ROA and ROE. Having found support for aggregation, I calculated mean intensity for each CEO across all four videos. I used a multilevel model and regressed ROA over four years and ROE over four years (in separate analyses) on average intensity component of facial expression. To examine the curvilinear relationship I included a squared model term. Mean intensity did not explain significant variance in ROA [$F(1, 44) = 1.81$, $p > .05$] or ROE [$F(1, 45) = 1.46$, $p > .05$]. The squared model term did not explain significant variance in ROA [$F(1, 44) = 1.67$, $p > .05$] or ROE [$F(1,45) = 1.55$)]. Table 5 displays the results. Results did not support Hypothesis 5.

To test Hypothesis 6, which addressed the consistency of facial expressions over time, I calculated an intra-member agreement index (r_{wg}) for both brow lowering, happiness, mean intensity, and mean number of AUs per event across videos. I used brow lowering as a proxy for anger and omitted sadness due to the lack of anger and sadness displays. I did not find evidence to suggest that brow lowering (mean $r_{wg} = .12$) or happiness (mean $r_{wg} = .31$) remained consistent across videos. However, I did find evidence (as stated earlier in my support for aggregation) that mean intensity ($r_{wg} = .80$) and mean number of AUs per event ($r_{wg} = .72$) remained consistent over time. Therefore, results partially supported Hypothesis 6.

Company Size Moderation Test

Over concerns for moderation by company size, I ran two sets of analyses. The first set defined company size by number of employees in 2008. The second set defined company size by net worth of the company in 2008. In both sets of analyses the addition of company size as did not change any conclusions that I drew from the data. Therefore I

omitted these analyses from the results and discussion sections, but have included them in Appendices B (number of employees) and C (net worth).

Table 5

ROA and ROE Regression on Intensity

Variable	df	Pillai's Trace	F	p
ROA				
Between				
Intensity	1		1.81	.19
Intensity Squared	1		1.67	.20
Error	44			
Within	3			
Year	3	0.02	0.33	.81
Years X Intensity	3	0.02	0.29	.83
Year X Intensity Sqr.	3	0.02	0.27	.85
Error	42			
ROE				
Between				
Intensity	1		1.46	.23
Intensity Squared	1		1.55	.22
Error	45			
Within				
Year	3	0.04	0.62	.60
Year X Intensity	3	0.04	0.55	.65
Year X Intensity Sqr.	3	0.04	0.57	.64
Error	43			

Note. * denotes $p < .05$.

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Discussion

Study Purpose

The purpose of this study was to examine the relationship between CEO facial expression and organization-level performance. It was also a feasibility test for the use of FACS to detect differences in expressive style. A secondary purpose was to examine the consistency of CEOs' expressive styles over time. Though I failed to find an effect for my primary purpose, relating CEO emotional displays to organization-level performance, my research contributes to the literature in three ways. First, my results supported the idea that some CEOs are more expressive than others. Second, although CEO expressiveness remained consistent across situations, my results indicated that the specific emotions displayed by CEOs change across situations. Third, my results supported using FACS to detect an expressive style in a business setting.

Consistency of CEO Expressiveness

My results supported the idea that CEOs have varying levels of expressiveness and that their expressiveness remains consistent over time. Results from my internal consistency calculation supported this idea. Finding a consistency in expressive style is consistent with the affective style literature (e.g., Keltner, 1996; Magai & McFadden, 1995; Malatesta, 1990). My results add to the literature by using an objective measure of facial expression over time to test the concept of an "expressive style" (McFadden, 1995; Malatesta, 1990). However, similar communication situations, such as annual reports to stockholders, could explain this pattern in communicative style. I attempted to control

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for similarity of the communication situations by collecting videos from a variety of networks and types of speaking engagements.

CEO Contextually Dependent Displays of Emotion

Despite finding consistency in affective style within CEO, my study demonstrated that the emotions (e.g., happiness, anger) displayed by a CEO change over time. Results from Hypothesis 6, which examined the consistency of the specific emotions displayed across situations, supported this concept. I did not find a relationship among expressed emotions across situations. These situational differences imply that CEOs are adapting their expressed emotions to the situation. Expressed emotion does not relate to other situations, but it might relate well to the situation's speech content. Future researchers should examine the extent to which CEOs match the emotions they display to the content of their speeches. Sampling error could have affected my results. However, I attempted to control for this by randomly sampling segments from as close to the middle of a video as I could obtain. Also, potentially, I might not have examined enough seconds from each video to obtain the full range of emotions that CEOs displayed.

FACS in a Business Setting

My study supported the use of FACS in a business setting. Previous researchers have used FACS to examine specific emotions (e.g., Keltner et al., 2005) or facial movement in response to specific contextual stimuli (e.g., Harker & Keltner, 2005). In business, leaders veil their emotions, and situations are not sufficiently uniform to base a study on identical contextual stimuli. However, my study demonstrated that researchers could use FACS to study something as broad as an expressive style which is not contextually dependent. Additionally, organizational researchers can use FACS to

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develop objective measures of previously subjective constructs such as expressed emotions.

CEO Emotional Displays and Organization-Level Outcomes

Finally, my results failed to provide evidence for a relationship between specific emotions or emotional intensity and organizational outcomes. Results regarding relationships between specific emotions and outcomes did not differ depending on whether the emotion was negative or positive. Results from Hypothesis 1 failed to reveal a significant relationship between CEO anger and organization level outcomes. Results from Hypothesis 2, which examined the relationship between CEO sadness and organization level outcomes, could have illuminated further this relationship, but I did not have enough data to test that hypothesis. In previous studies researchers found a relationship between negative emotions in leaders and performance (Keating et al., 1997; Mueller & Mazer, 1996; Rahim, Antonioni, & Psenicka, 2001; Rule & Ambady, 2010). Because my results failed to support a significant relationship, they did not support the previous literature.

Similar to the tests of negative emotions, results from Hypothesis 3, that leader happiness relates to organization-level performance, and Hypothesis 4, that leader sincerity relates to organization level outcomes, did not support relationships. My results are not consistent with the literature on satisfaction and performance (Staw & Barsade, 1993), positive emotion (e.g., Fredrickson, 1998), faking emotions and work outcomes (Glaso & Einarsen, 2008), and relating to the use of the upper and lower face in emotional displays with actual experience of the displayed emotion (Ekman, Friesen, & O'Sullivan, 2005). These streams of research all suggest that a relationship exists

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between positive emotion and performance. Lack of power could explain my results. I had a small sample size which could have made it difficult to detect a distal relationship such as the one between leader expression and organization-level performance. Additionally, if CEOs tailor their emotions to the situation, I might not have selected enough situations that required negative emotions, and therefore, might not have had sufficient data to test this relationship.   Future researchers should examine negative emotion within situations that necessitates CEOs to display negative emotions such as sadness and anger.

Finally, my results did not support a relationship between emotional intensity, a component of the CEOs' expressive styles, and organization level outcomes. Hypothesis 5, that moderate emotional intensity would be related to higher organization-level performance than low or high intensity, supported this non-relationship. This result did not support previous literature that found that too much or too little emotion could hurt a speaker's credibility (Golding, Fryman, Marsil & Yozwiak, 2003). However, a small sample size and range restriction might explain my findings. The relationship between emotional intensity and organization-level performance is distal, and my design might not have had enough power to find this relationship. Additionally, if emotional intensity has a curvilinear relationship with leadership success, then most CEOs might have moderate emotional strength which would create range restriction when examining emotional intensity. Future researchers should examine this relationship with a wider range of management skill level. They also might consider intensity as a predictor for outcomes other than financial performance.

Limitations

Collecting only publicly available videos had several limitations. First, the videos were not filmed with coding in mind and potentially had limited face visibility. I chose videos that were possible for me to code, but the quality of most of the videos was not optimal for coding. Second, relying on public video footage did not allow me to specify exact time (e.g., year) intervals between videos. To address this issue, I selected videos from as many different years as possible within the examined time frame. Third, I could not control the situations in which CEOs spoke. To address this concern, I coded the situations in which the videos took place in order to check for situational differences. However, because all situations involved public speaking, the situation similarity still could have influenced my results.

Future Research

Despite having some limitations, my study also suggests several future research ideas. To the extent that organizational performance was too distal an outcome, future research might benefit from examining the effects of CEO emotion on more proximal outcomes. For example, researchers could examine the effects of CEO emotion on the emotion and behavior of the CEO's direct reports, i.e., his/her immediate subordinates. Additionally, future researchers should examine the consistency of a CEO's expressive style in different situations. For example, researchers could examine how expressive style differs in public speaking to large groups versus in dyadic interactions. Finally, future research would benefit by examining the relationship between CEO emotional display and more proximal outcomes in the workplace, e.g., attitudes or performance of executives reporting to a CEO.

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Conclusion

In sum, my study's main purpose was to determine whether a relationship existed between CEOs' displayed emotions and organization-level performance. I also wanted to determine if I could use FACS in a business setting. Lastly, I wanted to explore the nature of CEOs' expressive styles. My results did not support a relationship between CEOs' emotion displays and organization-level performance. However, my results did support the idea that CEOs each have their own expressive style that remains consistent across situations and that researchers can use FACS to detect this expressive style. Finding that the expressiveness of a CEO remains consistent over time whereas the specific emotions displayed change implies that CEOs adapt their emotional expression to situations but have less control over *how* expressive they are. This study provides a baseline for future researchers to study correlates of expressive style, such as creative thinking, and correlates of situationally tailored emotional displays, such as charismatic leadership. In summary, CEOs have an expressive style that remains consistent across time, but tailor their emotions to the situation. FACS is a feasible method to use to capture those displays of facial expressions which opens new possibilities in leadership research

References

Agle, B. R., Nagarajan, N. J., Sonnenfeld, J. A., & Srinivasan, D. (2006). Does CEO charisma matter? An empirical study analysis of the relationships among organizational performance, environmental uncertainty, and top management team perceptions of CEO charisma. *Academy of Management Journal, 49,* 161-174.

Aldrich, H. E. (1979). *Organizations and environments.* Englewood Cliffs, JJ: Prentice-Hall.

Anderson, C. A., Berkowitz, L., Donnerstein, E., Huesmann, L. R., Johnson, J., Linz, D., Malamuth, N. M., Wartella, E. (2003). The influence of media violence on youth. *Psychological Science in Public Interest, 4,* 81-110. doi: 10.1111/j.1529-1006.2003.pspi_1433.x

Andrews, R. & Boyne, G. A. (2010). Capacity, leadership, and organizational performance: Testing the black box model of public management. *Public Administration Review,* pp. 443-454.

Ashour, A. S., & Johns, G. (1983). Leader influence through operant principles: A theoretical and methodological framework. *Human Relations, 36,* 603-626.

Ashkanasy, N. M. (2003a). Emotions in organizations: A multilevel perspective. In: F. Dansereau and F. J. Yamarino (eds), *Research in Multi-level Issues,* Vol. 2: *Multi-level Issues in Organizational Behavior and Strategy* (pp. 9-54). Oxford, UK: Elsevier Science.

Ashkanasy, N. M., Ashton-James, C. E., Jordon, P. J. (2004). Performance impacts of appraisal and coping with stress in workplace settings: The role of affect and emotional intelligence. In P. Perrewe & D. Ganster (eds), *Research in Occupational Stress and Wellbeing,* Vol. 3: *Emotional and Psychological Processes and Positive Intervention Strategies* (pp. 1-43). Oxford, UK: Elsevier Science.

Ashkanasy, N. M., Hartel, C. E., & Zerbe, W. J. (2000). Introduction. In N. M. Ashkanasy, W. Zerbe, & C. E. J. Hartel (eds), *Emotions in the Workplace: Research, Theory, and Practice* (pp. 3-18). Westport, CT: Quorum Books.

Avolio, B. J., Sosik, J. J., Jung, D. I., & Berson, Y. (2003). Leadership models, methods, and applications. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.) *Handbook of Psychology: Industrial and Organizational Psychology, 12* (pp. 277-307). Hoboken, NJ: John Wiley & Sons, Inc.

Bard, P. (1934). On emotional experience after decortication with some remarks on theoretical views. *Psychological Review, 41,* 309-329.

Barling, J., Christie, A., & Hoption, C. (2011). Leadership. In Zedeck (ed.) *APA Handbook of Industrial Organizational Psychology, 1:* pp. 183-240.

Baritz, L. (1960). *The Servants of Power: A History of the Use of Social Sciences in American Industry,* Middletown, CT: Wesleyan University Press, 273 pp.

Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly, 47,* 644-675.

Bartel, C. A. & Saavedra, R. (2000). The collective construction of work group moods. *Administrative Science Quarterly, 45*(4): 802-36.

Bass, B. M. (1985). *Leadership and performance beyond expectations.* New York: The Free Press.

Bauer, T. N., Green, S. G., & Bauer, T. N. (1996). Development of leader-member exchange: A longitudinal test. *The Academy of Management Journal, 39*(6), 1538-1567.

Baum, J. R., Locke, E. A., & Kirkpatrick, S. A. (1998). A longitudinal study of the relation of vision and vision communication to venture growth in entrepreneurial firms. *Journal of Applied Psychology, 83,* 43-54.

Berlew, D. E. (1974). Leadership and organizational excitement. *California Management Review, 17,* 21-30.

Boehm, J. K. & Lyubomirsky, S. (2008). Does happiness promote career success? *Journal of Career Assessment, 16*(1), pp. 101-116.

Boeker, W. (1987). Strategic change: The influence of managerial characteristics and organizational growth. *Academy of Management Journal, 40*, 152-170.

Bowling, N. A. (2007). Is the job satisfaction-job performance relationship spurious? A meta-analytic examination. *Journal of Vocational Behavior, 71*, 167-187.

Brief, A. P., & Weiss, H. M. (2001). Organizational behavior: Affect in the workplace. *Annual Review Psychology, 53,* 279-307.

Brief, A. P. & Roberson, L. (1989). Job attitude organization: an exploratory study. *Journal of Applied Social Psychology, 19*: pp. 717-727.

Byrne, Z., Pitts, V., Chiaburu, D., & Steiner, Z. (2009). Managerial trustworthiness and social exchange with the organization. *Journal of Managerial Psychology, 26*(2), pp. 108-122.

Burton, R. M., Lauridsen, J., & Obel, B. (2004). The impact of organizational climate and strategic fit on firm performance. *Human Resource Management, 43*(1), pp. 67-82.

Calvo, M. G. & Nummenmaa, L. (2008). Detection of Emotional Faces: Salient physical features guide effective visual searches. *Journal of Experimental Psychology: General, 137*(3), 471-494.

Camras, L. A., , & Witherington, D. C. (2005). Dynamical systems approaches to emotional development. *Developmental Review*, *25*(3-4), 328-350. doi:10.1016/j.dr.2005.10.002

Cannon, W. B. (1927). The James-Lange theory of emotions: A critical examination and an alternate theory. *American Journal of Psychology, 39,* 106-124.

Chatterji, A. K., Levine, D. I., & Toffel, M. W. (2009). How Well Do Social Ratings Actually Measure Corporate Social Responsibility?. *Journal of Economics and Management Strategy, 18*(1), 125–169.

Chesney, M. A., Ekman, P., Friesen, W. V., Black, G. W., Hecker, M. H. L. (2005). Type A behavior pattern: Facial behavior and speech components. In P. Ekman and E. L. Rosenberg (eds.), *What the face reveals: Basic and applied studies of spontaneous expression using the Facial Action Coding System (FACS)* (2nd ed.), pp. 551 - 566. New York: Oxford University Press.

Cole, Bruch, & Vogel (2006). Emotion as mediators of the relations between perceived supervisor support and psychological hardiness on employee cynicism.

Collins, D. B. (2001). Organizational performance: The future focus of leadership development programs. *The Journal of Leadership Studies, 7*(4), 43-54.

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Collins, D. B. (2001). Organizational performance: The future focus of leadership development programs. *The Journal of Leadership Studies, 7*(4), 43-54.

Conger, J. A. & Kanungo, R. N. (1998). *Charismatic Leadership in Organizations.* Thousand Oaks, CA: Sage. 288 pp.

Cote, S. & Morgan, L. M. (2002). A longitudinal analysis of the association between emotion regulation, job satisfaction, and intentions to quit. *Journal of Organizational Behavior, 23*, 947-962.

D'Aveni, R. A. (1990). Top managerial prestige and organizational bankruptcy. *Organization Science, 1*, 121-142.

Damasio, A. R. (1994). *Descartes' Error: Emotion, Reason and the Human Brain.* New York: HarperCollins.

Damen, Van Kippenberg, & Van Knippenberg (2008). Affective Match in Leadership: Leader Emotional Displays, Follower Positive Affect, and Follower Performance.

Dansereau, E, Cashman, J., & Graen, G. (1973). Instrumentality theory and equity theory as complementary approaches in predicting the relationship of leadership and turnover among managers. *Organizational Behavior and Human Performance, 10,* 184-200.

Danserau, F., Graen, G., & Haga, J. (1975). A vertical dyad lnkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. *Organizational Behavior and Human Performance, 36,* 46-78.

Darwin, C. (1965). *The expression of the Emotions in Man and Animals.* Chicago: University of Chicago Press. (Original work published 1862)

DeConink, J. B. & Johnson, J. T. (2009). The effects of perceived supervisor support, perceived organizational support, and organizational justice on turnover among salespeople. *Journal of Selling & Sales Management, 29*(4), pp. 333-350.

De Cramer, D., van Dijke, M., & Mayer, D. M. (2010). Cooperating when "You" and "I" are treated fairly: The moderating role of leader prototypicality. *Journal of Applied Psychology.* Advance online publication. doi: 10.1037/a0020419

Diener, E., Smith, H., & Fujita, F. (1995). The personality structure of affect. *Journal of Personality and Social Psychology, 69,* 130-141.

Dimberg, U., Thunberg, M., , & Elmehed, K. (2000). Unconscious facial reactions to emotional facial expressions. *Psychological Science*, *11*(1), 86-89. doi:10.1111/1467-9280.00221

Dojbak Haakonsson, D., Burton, R. M., Obel, B., & Lauridsen, J. (2008). How failure to align organizational climate and leadership style affects performance. *Management Decisions, 46*(3), 406-432.

Dudley, N. M., Orvis, K. A., Lebiecki, J. E., & Cortina, J. M. (2006). A meta-analytic investigation of conscientiousness in the prediction of job performance: Examining the intercorrelations and the incremental validity of narrow traits. *Journal of Applied Psychology, 91*(1), 40-57.

Duclos, S. E., Laird, J. D., Scheider, E., Sexter, M., Stern, L., & Van Lighten, O. (1989). Emotion-specific effects of facial expressions and postures on emotional experiences. *Journal of Personality and Social Psychology, 57,* 100-108.

Eisenberger, R., Karagonlar, G., Stnglhamber, F., Neves, P., Becker, T. E., Gonzalez-Morales, M. G., Steiger-Mueller, M. (2010). Leader-Member Exchange and

Affective Organizational Commitment: The Contribution of Supervisor's

Organizational Embodiment. *Journal of Applied Psychology.* Advance online

publication. doi: 10.1037/a020858

Eisenhardt, K. M. & Schoonhoven, C. B. (1990). Organizational growth: Linking

founding team, strategy, environment, and growth among U. S. semiconductor

ventures, 1978-1988. *Administrative Science Quarterly, 35,* 504-529.

Ekman, P. (1972). Universals and cultural differences in facial expressions of emotion.

In J. Cole (Ed.), *Nebraska symposium on motivation, 1971* (pp. 207-283). Lincoln:

University of Nebraska Press.

Ekman, P. (1973). *Darwin and facial expression: A century of research in review.* New

York: Academic Press.

Ekman, P. (1980). Asymmetry in facial expression. *Science, 209*(4458), 833-836.

Ekman, P. (1984). Expression and the nature of emotion. In K. R. Scherer & P. Ekman

(Eds.), *Approaches to emotion* (pp. 319-344). Hillsdale, NJ: Lawrence Erlbaum

Associates.

Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion, 6,* 169 –

200.

Ekman, P. (1997). Expression or communication about emotion. In N. L. Segal & C. C.

Weisfeld (Eds.). *Uniting Psychology and Biology: Integrative Perspectives in

Human Development,* p. 315-338. Washington, DC: American Psychological

Association.

Ekman, P., & Friesen, W. V. (1978). *The facial action coding system (FACS): A technique for the measurement of facial action.* Palo Alto, CA: Consulting Psychologists Press.

Ekman, P., Friesen, W. V., & Ellsworth, P. (1972). *Emotion in the human face.* New York: Pergamon.

Ekman, P., Friesen, W. V., & Hager, J. C. (2002). The facial action coding system CD-ROM. Salt Lake City, UT: Research Nexus.

Ekman, P., Friesen, W. V., & O'Sullivan (2005).

Emery, G. W. (1998). *Corporate Finance: Principles and Practice.* Reading: Addison-Wesley.

Ensley, M. D., Pearce, C. L., & Hmieleski, K. M. (2006). The moderating effect of environmental dynamism on the relationship between entrepreneur leadership behavior and new venture performance. *Journal of Business Venturing, 21*, 243-263.

Erdogan, B. & Bauer, T. N. (2010). Differentiated Leader-Member Exchanges: The Buffering Role of Justice Climate. *Journal of Applied Psychology.* Advanced online publication. doi: 10.1037/a0020578

Erdogan, B. & Enders, J. (2007). The top: Supervisors' perceived organizational support as a moderator of leader-member exchange to satisfaction and performance relationships. *Journal of Applied Psychology, 92(2)*, 321-330.

Estes, B. & Wang, J. (2008). Workplace incivility: Impacts on individual and organizational performance. *Human Resource Development Review, 7*(2), pp. 218-240.

Faul, A. C., Yankeelov, P. A., Rowan, N. L., Gillette, P., Nicholas, L. D., Borders, K. W., Deck, S., Paariser, D., Wiegand, M. (2009). Impact on geriatric assessment and self-management support on community-dwelling older adults with chronic illnesses. *Journal of Gerontological Social Work, 52*(3), 230-240. doi: 10.1080/01634370802609288

Fiedler, F. F. (1967). *A theory of leadership effectiveness.* New York:McGraw-Hill.

Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*(3), 300-319.

Frijda, N. H. (1953). The understanding of facial expression of emotion. *Acta Psychologica*, *9*, 294-362. doi:10.1016/0001-6918(53)90021-3

Frijda, N. H. (1958). Facial expression and situational cues. *Journal of Abnormal and Social Psychology, 57,* 149-154.

Frijda, N. H. (1969). Recognition of emotion. In L. Berkowitz (Ed.), *Advances in experimental social psychology IV*. New York: Academic Press.

Frijda, N. (1986). *The emotions*. Cambridge, UK: Cambridge University Press.

Frijda, N. H. (1994). Varieties of affect: Emotions and episodes, moods, and sentiments. In P. Ekman & R. J. Davidson (Eds.), *The nature of emotion* (pp. 59-67). New York: Oxford University Press.

Frijda, N. H. (2008). The psychologists' point of view. In M. Lewis, J. M. Haviland-Jones, & L. Feldman Barrett (Eds.), *Handbook of Emotions* (pp.68-87). New York: The Guilford Press.

George, J. M. (1989). Mood and absence. *Journal of Applied Psychology, 74*: pp. 107-116.

69

George, J. M. (2000). Emotions and leadership: the role of emotional intelligence. *Human Relationships, 53*(8): 1027-1055.

Gladwell, M. (2002). The Naked Face. *The New Yorker.* August 5, 2002.

Gladwell, M. (2006). *Blink: The Power of Thinking Without Thinking.* New York: Little, Brown and Company.

Glaso, L. & Einarsen, S. (2008). Emotion regulation in leader-follower relationships. *European Journal of Work and Organizational Psychology*, *17*(4), pp. 482-500.

Golding, J.M., Fryman, H.M., Marsil, D.F., & Yozwiak, J.A. 2003. Big girls don't cry: The effect of child witness demeanor on juror decisions in a child sexual abuse trial. *Child Abuse and Neglect*, 27: 1311-1321.

Graen, G. B., Liden, R., & Hoel, W. (1982). Role of leadership in the employee withdrawal process. *Journal of Applied Psychology, 67,* 868-872.

Graen, G. B., Novak, M. A., & Sommerkamp, P. (1982). The effects of leader-member exchange and job design on productivity and satisfaction: Testing a dual attachment model. *Organizational Behavior and Human Performance, 30,* 109-131.

Graen, G. B., Orris, J. B., & Johnson, T. W. (1973). Role assimilation processes in a complex organization. *Journal of Vocational Behavior, 3*(4), 395-420.

Gross, J. J. (2008). Emotion regulation. In M. Lewis, J. M. Haviland-Jones, & L. Feldman Barett (Eds.). *Handbook of Emotions.* (3rd ed., pp. 497-512). New York: The Guilford Press.

Haggard, E. A., & Isaacs, K. S. (1966). Micro-momentary facial expressions as indicators of ego mechanisms in psychotherapy. In L. A. Gottschalk & A. H. Auerbach

70

(Eds.), *Methods of Research in Psychotherapy,* pp. 154-165. New York: Appleton-Century-Crofts.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 16*, 719-742.

Hareli, S., & Rafaeli, A. (in press). Emotion cycles: On the social influence of emotion in organizations. *Research in Organizational Behavior.*

Harker, L., , & Keltner, D. (2001). Expressions of positive emotion in women's college yearbook pictures and their relationship to personality and life outcomes across adulthood. *Journal of Personality and Social Psychology*, *80*(1), 112-124. doi:10.1037/0022-3514.80.1.112

Harrington, D. R. (2002). *Financial Analysis: Practical Tools for Making Effective Financial Decisions in Business.* Canada: Thomson Learning.

Harrison, D. A., Newman, D. A., & Roth, P. L. (2006). How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences. *Academy of Management Journal, 49*(2), 305-325.

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1994). *Emotional Contagion.* Paris: Cambridge University Press.

Hendriks, M., & Vingerhoets, A. 2006. Social messages of crying faces: Their influence on anticipated person perception, emotions and behavioral responses. *Cognition and Emotion*, 20: 878-886.

Hershey, R. B. (1932). *Workers' Emotions in Shop and Home: A Study of Individual Workers from the Psychological and Physiological Standpoint.* Philadelphia: University Pennsylvania Press.

71

Hoppock, R. (1935). *Job Satisfaction.* New York: Harper, 303 pp.

Hill, D. (2010). *Emotionomics: Leveraging emotions for business success.* Philadelphia: Kogan Page.

House, R. J. (1971). A path goal theory of leader effectiveness. *Administrative Science Quarterly, 16,* 321-338.

House, R.J. & Podsakoff, P.M. (1994). Leadership Effectiveness: Past perspectives and future directions for research. In J. Greenberg (Ed.), *Organizational Behavior: The State of the Science* (pg. 45-82). Hillsdale, NJ: Lawrence Erlbaum Associates.

Iaffaldano, M. T., & Muchinsky, P. M. (1985). Job satisfaction and job performance: A meta-analysis. *Psychological Bulletin, 97*(2), 251-273.

Ilies, R., Scott, B. A., & Judge, T. A. (2006). The interactive effects of personal traits and experienced states of intraindividual patterns of citizenship behavior. *Academy of Management Journal, 49*(3): pp. 561-575.

Introduction to SAS. UCLA: Academic Technology Services, Statistical Consulting Group. from http://www.ats.ucla.edu/stat/sas/library/ multivariate_regrssn.htm/ (accessed June 5, 2012).

Isen, A. M. (1999). Positive affect and creativity. In S. Russ (Ed.), *Affect, Creative Experience, and Psychological Adjustment* (pp. 3-17). Philadelphia: Bruner/Mazel.

Isen, A.M. (2001). An influence of positive affect on deci- sion making in complex situations: Theoretical issues with practical implications. *Journal of Consumer Psychology, 11*(2), 75–85

Isen, A. M. & Baron, R. A. (1991). Positive affect as a factor in organizational-behavior. In B. M & Staw, L. L. Cummings (Eds.), *Research in Organizational Behavior,* Greenwhich, CT: JAJ Press.

Izard, C. E. (1977). *Human emotions.* New York: Plenum Press.

Izard, C. E., & Malatesta, C. Z. (1987). Perspectives on emotional development: I. Differential emotions theory of early emotional development. In J. D. Osofsky (Ed.), *Handbook of infant development* (2nd ed.) (pp. 494-554). New York: John Wiley.

Izard, C. E., & Tomkins, S. S. (1965). *Affect, Cognition, and Personality: Empirical Studies.* New York: Springer.

James, W. (1884). What is emotion? *Mind, 19,* 188-205.

Judge, T. A., Thoreson, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction-job performance relation- ship: A qualitative and quantitative review. *Psychological Bulletin, 127*, 376–407. doi: 10.1037//0033-2909.127.3.376

Judge, T. A., Bono, J. E., Illies, R., & Gerhardt, M. W. (2002) Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology, 87*(4), 765-780. doi: 10.1037/0021-9010.87.4.765

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satifaction. *Journal of Applied Psychology, 87*: 530-541.

Jung, D., Chow, C. and Wu, A. (2003), "The role of transformational leadership in enhancing organizational innovation: hypothesis and some preliminary findings", *The Leadership Quarterly, 14*, 525-44.

Keating, C. F., Mazur, A., & Segall, M. H. (1977). Facial gestures which influence the perception of status. *Sociometry, 40,* 374-378.

Keltner, D. (1996). Facial expressions of emotion and personality. In C. Magai, S. H. McFadden (Eds.) *Handbook of Emotion, Adult Development, and Aging,* pp. 385-401. San Diego: Academic Press.

Keltner, D., Moffitt T. E., & Stouthamer-Loeber, M. (2005). Facial expressions of emotion and psychopathology in adolescent boys. In P. Ekman and E. L. Rosenberg (eds.), *What the face reveals: Basic and applied studies of spontaneous expression using the Facial Action Coding System (FACS)* (2nd ed.), pp. 532 - 547. New York: Oxford University Press.

Kerr, S., & Jermier, J. M. (1978). Substitutes for leadership: Their meaning and measurement. *Organizational Behavior and Human Performance, 22,* 375-403.

Kirk, R. E. (1995). *Experimental Design: Procedures for the Behavioral Sciences* (3rd ed.). Pacific Grove, CA: Brooks/Cole Publishing Company.

Kornhauser, & Sharp (1932). Employee attitudes: suggestions from a study in a factory. *Personality Journal, 10*: 393-404.

Krumhuber, E. G. & Manstead, A. S. R. (2009). Can Duchenne smiles be feigned? New evidence on felt and false smiles. *Emotion, 9*(6), 807-820. doi: 10.1037/a0017844

Kupfermann, I. (1981) In E. R. Kandel and J. H. Schwartz. (Eds). Learning. *The Principles of Neuroscience,* pp. 561-590. New York: Elsevier/North-Holland.

Laird, J. D. (1974). Self-attribution of emotion: The effects of expressive behavior on the quality of emotional experience. *Journal of Personality and Social Psychology, 29*(4), 475-486. doi: 10.1037/h0036125

74

Lange, C. (1885). One leuds beveegelser. In K. Dunlap (Ed.), *The emotions.* Baltimore: Williams & Wilkins.

Lewin, K., Lippit, R., & White, R. (1939). Patterns of aggressive behavior in experimentally created "social climates." *The Journal of Social Psychology, 10,* 271-299.

Lewis, K. M. 2000. When leaders display emotion: How followers respond to negative emotional expression of male and female leaders. *Journal of Organizational Behavior,* 21: 221–234.

Lieberman, S. & O'Connor, J. F. (1972). Leadership and organizational performance: A study of large corporations. *American Sociological Review, 37,* 117-130.

Ling, Y., Lubatkin, M. H., Simsek, Z., & Veiga, J. F. (2008). The impact of transformational CEOs on the performance of small- to medium-sized firms: Does organizational context matter? *Journal of Applied Psychology 93*(4): 923-934.

Locke E, A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.) In *Handbook of I/O Psychology* (1st ed), pp. 1297–349. Chicago: Rand-McNally.

Magai, C., & McFadden, S. (1995). *The role of emotion in social and personality research: History, theory, and research.* New York: Plenum Press.

Malatesta, C. Z. (1990). The role of emotions in the development and organization of personality. In R. A. Thompson (Ed.), *Nebraska Symposium on Motivation, 1988: Socioemotional Development,* pp. 1-56. Lincoln, NE: University of Nebraska Press.

Manner M. H. (2010). Impact of CEO characteristics on corporate social performance. *Journal of Business Ethics, 93*: 53-72.

Martin, R., Epitropak, O., Thomas, G., & Toakas, A. (2010). A review of leader-member exchange research: Future prospects and directions. In G. P. Hodgkinson & J. K. Ford (Eds.), *International Review of Industrial and Organizational Psychology, Volume 25: pp. 35-87. United Kingdom: Wiley-Blackwell.*

Martinez-Campillo A. & Fernadnez-Gago R. (2011). Diversification strategy, CEO management style and firm performance: an application of Heckman's two-stage method. *Qual Quant, 45*: 59-73,

Mauss, I. B., Cook, C. L., & Gross, J. J. (2007). Automatic emotion regulation. *Social and Personality Psychology Compass, 1,* 146-167.

McCrae, R. R. & John, O. P. (1991). An introduction to the Five-Factor Model and its applications.

McHugo, G. J., Lanzetta, J. T., Sullivan, D. G., Masters, R. D., & Englis, B. G. (1985). Emotional Reactions to a Political Leader's Expressive Displays. *Journal of Personality and Social Psychology, 49*(6), pp. 1513-1529. doi: 10.1037/0022-3514.49.6.1513

McNatt, D. B., & Judge, T. A. (2008). Self-efficacy intervention, job attitudes, and turnover: A field experiment with employees in role transition. *Human Relations, 61*(6), 783-810. doi: 10.1177/0018726708092404

Mazur, A. & Mueller, U. (1996). Facial Dominance. In A. Somit and S. Peterson (Eds.), *Research in Biopolotics,* Vol. 4, pp. 99-111. London: JAI Press.

Munsterberg, H. (1915). *Psychology: General and Applied.* New York: Appleton, 1915.

Net worth. (2011) *WebFinance Inc.* Retrieved June 2, 2011, from

http://www.investorwords.com/3267/net_worth.html

Nelson, C. A. & De Haan, M. (1997). A neurobehavioral approach to the recognition of

facial expressions in infancy. In J. A. Russell & J. M. Fernandez-Dols (Eds.), *The*

Psychology of Facial Expression, pp. 176-204. New York: Cambridge University

Press.

North American Industry Classification System. (2010). *US Census Bureau.* Retrieved

June 2, 2011, from http://www.census.gov/eos/www/naics.htm

Nyberg, A. (2010). Retaining your high performers: Moderators of the performance-job

satisfaction-voluntary turnover relationship. *Journal of Applied Psychology, 95*(3),

440-453.

Obradovich, J. D. (2009). Influence of leadership and culture on financial performance: A

case study in a troubled industry. *Dissertation Abstracts International Section A:*

*Humanities and Social Sciences, 71(*1-A), 352.

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome.*

Lexington, MA: DC Health.

Organ, D. W. & Near, J. P. (1985). Cognitive vs. affect masures of job satisfaction.

International Journal of Psychology, 20: 241-54.

Osgood, C. E. (1955). Fidelity and relaiblity. In H. Quastler (Ed.), *Information theory in*

psychology (pp. 374-384). Glencoe: Free Press.

Osgood, C. E. (1966). Dimensionality of the semantic space for communication via

facial expressions. *Scandinavian Journal of Psychology, 7,* 1-30.

Pearce, J. L., Stevenson, W. B., & Perry, J. L. (1985). Managerial compensation based on

    organizational performance: A time series analysis of the effects of merit pay.

    Academy of Management Journal, 28, 261-278.

Peterson, R. S., Martorana, P. V., Smith, D. B., & Owens, P. D. (2003). The impact of

    chief executive officer personality on to management team dynamics: One

    mechanism by which leadership affects organizational performance. *Journal of*

    Applied Psychology, 88(5): 795-808.

Pfeiffer, J. & Salancik, G. R. (1978). The external control of organizations: A resource

    dependence perspective. New York: Harper and Row.

Podsakoff, P. M., MacKenzie, S. B., & Bommer, W. H. (1996). Transformational leader

    behaviors and substitutes for leadership as determinants of employee satisfaction,

    commitment, trust, and organizational citizenship behaviors. *Journal of*

    Management, 22(2), pp.259-298. doi: 10.1016/S0149-2063(96)90049-5

Pradeep, A. K. (2010). *The Buying Brain: Secrets for Selling to the Subconscious.*

    Hoboken, NJ: John Wiley & Sons, Inc.

Rahim, M. A., Antonioni, D., & Psenicka, C. (2001). A structural equations model of

    leader power, subordinates' styles of handling conflict, and job performance.

    International Journal of Conflict Management, 12(3), 191-211. doi:

    10.1108/eb022855

Rego, A. & Cunha, M. P. (2008). Authentizotic climates and employee happiness:

    Pathways to individual performance? *Journal of Business Research, 16*(7), 739-

    752. doi: 10.1016/j.jbusres.2007.08.003

78

Rego, A., Ribeiro, N., & Cunha, M. P. (2009). Perceptions of organizational virtuousness and happiness as predictors of organizational citizenship behaviors. *Journal of Business Ethics, 93*(2), 215-232. doi: 10.1007/s10551-009-0197-7

Reisenzein, R., & Weber, H. (2009). Personality and emotion. In P. J. Corr and G. Matthews (Eds.), *The Cambridge handbook of personality psychology,* pp. 54-71. New York: Cambridge University Press.

Ricci, J. A., Chee, E., Lorandeau, A. L., & Berger, J. (2007). Fatigue in the U.S. workforce: Prevalence and implications for lost productive work time. *Journal of Occupational & Environmental Medicine, 49*(1), 1-10. doi: 10.1097/01.jom.0000249782.60321.2a

Robbins, T. L. & DeNisi, A. S. (1994). A closer look at interpersonal affect as a distinct influence on cognitive processing in performance evaluations. *Journal of Applied Psychology, 79:* 341-53.

Roethlisberer, F. J. & Dickson, W. J. (1939). *Management and the Worker.* (615 pp.) Cambridge, MA: Harvard University Press.

Rosekind, M. R., Gregory, K. B., Mallis, M. M., Brandt, S. L., Seal, B., Lerner, D. (2010). The cost of poor sleep: Workplace productivity loss and associated costs. *Journal of Occupational and Environmental Medicine, 52*(1), 91-98. doi: 10.1097/JOM.0b013e3181c78c30

Rosenberg, E. L. (2005). Introduction: The study of spontaneous facial expressions in psychology. In P. Ekman and E. L. Rosenberg (eds.), *What the face reveals: Basic and applied studies of spontaneous expression using the Facial Action Coding System (FACS)* (2nd ed.), pp. 3 - 18. New York: Oxford University Press.

Rule, N. O. & Ambady, N. (2010). Judgments of power from college yearbook photos
    and later career success. *Psychological and Personality Science, 2*(2), 154-158.
    doi: 10.1177/1948550610385473

Russell, J. A., Bachorowski, J., & Fernadez-Dols, J. M. 2003. Facial and vocal
    expressions of emotion. *Annual Review of Psychology. 54*: 329-49.

Russell, J. A. & Fernandez-Dols, J. M. (1997). What does a facial expression mean? In J.
    A. Russell & J. M. Fernandez-Dols (Eds.), *The Psychology of Facial Expression,*
    pp. 3-30. Cambridge: Cambridge University Press.

Sales Agents, Securities and Commodities (2010). In *O*NET Online*. Retrieved from
    http://www.onetonline.org/link/summary/41-3031.01#WagesEmployment

Sayette, M. A., Cohn, J. F., Wertz, J. M., Perrott, M. A., & Parrott, D. J. (1986). A
    psychometric evaluation of the facial action coding system for assessing
    spontaneous expression. *Journal of Nonverbal Behavior, 25*(3), 167-185.

Scandura, T. A., & Graen, G. B. (1984). Moderating effects of initial leader-member
    exchange status on the effects of a leadership intervention. *Journal of Applied
    Psychology, 69,* 428-436.

Schachter, S. (1964). The interaction of cognitive and physiological determinants of
    emotional state. In L. Berkowitz (Ed.), *Advances in experimental social
    psychology* (Vol. 1). New York: Academic Press.

Schleicher, D. J., Hansen, S. D., & Fox, K. E. (2011). Job attitudes and work values. In S.
    Zedeck (Ed.), *APA Handbook of Industrial and Organizational Psychology,
    Volume 3: Maintaining, Expanding, and Contracting the Organization,* p. 137-
    189. Washington, D.C.: American Psychological Association.

Schlosberg, H. (1941). A scale for judgment of facial expressions. *Journal of Experimental Psychology, 29*, 497-510.

Schlosberg, H. (1952). The description of facial expressions in terms of two dimensions. *Journal of Experimental Psychology, 44,* 229-237.

Schlosberg, H. (1954). Three dimensions of emotion. *Psychological Review, 61,* 81-88.

Schmitt & McCune (1981) The Relationship Between Job Attitudes and the Decision to Retire. *Academy of Management Journal, 24*(4): 795-802.

Schwarz, N. (1990). Feelings as information: Informational and motivational functions of affective states. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundation of social behavior,* Vol. 2, pp. 527-561.

Sims, H.P., Jr., & Szylagyi, A. D. (1975). Leader reward behavior and subordinate satisfaction and performance. *Organizational Behavior and Human Performance, 14,* 426-438.

Spector (1996). *Industrial and Organizational Psychology: Research and Practice.* New York: Wiley. 420 pp.

Staw and Barsade (1993) Affect and Managerial Performance: A Test of The Sadder-but-Wiser vs. Happier-and-Smarter Hypothesis. *Administrative Science Quarterly, 38:* 304-331.

Steyrer, J., Schiffinger, M., & Lang, R. (2008). Organizational commitment – A missing link between leadership behavior and organizational performance? *Scandinavian Journal of Management: An International Journal, 24,* 364-374.

Stogdill, R.M. & Coons, A.E. (1957). *Leader behavior: It's description and measurement.* Columbus: Ohio State University, Bureau of Business Research.

Sy, T., Cote, S., & Saavedra, R. 2005. The contagious leader: Impact of the leader's mood on the mood of group members, group affective tone, and group processes. *Journal of Applied Psychology*, 90(2): 295-305.

Thomas, A. B. (1988). Does leadership make a difference to organizational performance? *Administrative Science Quarterly, 33*, 388-400.

Strack, F. & Deutsch, R. (2004). Reflective and impulsive determinants of social behavior. *Personality and Social Psychology Review, 8,* 220-247.

Strack, F., Martin, L. L., & Strepper, S. (1988). Inhibiting and facilitating conditions of the human smile: A nonobtrusive test of the facial feedback hypothesis. *Journal of Personality and Social Psychology, 54,* 768-777.

Tiedens, L. Z. (2001). Anger and advancement versus sadness and subjugation: The effect of neative emotion expressions on social status conferral. *Journal of Personality and Social Psychology,* 80(1), 86-94.

Tomkins, S. S. (1962). *Affect, imagery, consciousness* (Vol. 1: The positive affects). New York: Springer.

Tomkins, S. S. (1965). Affect and the psychology of knowledge. In S. S. Tomkins & C. E. Izard (Eds.), Affect, cognition, and personality: Empirical studies (pp. 72–97). NY: Springer.

Tomkins, S. S. (1981). The quest for primary motives: Biography and autobiography of an idea. *Journal of Personality and Social Psychology, 41,* 306-329.

Tomkins, S. S. & Izard, C. E. (1965).

Tosi, H. L., Misangyi, V. F., Fanelli, A., Waldman, D. A., & Yammarino, F. J. (2004). CEO charisma, compensation, and firm performance. *The Leadership Quarterly, 15,* 405-420.

Totterdell, P. (2000). Catching moods and hitting runs: mood linkage and subjective performance in professional sports teams. *Journal of Applied Psychology, 85*(6): 848-59.

Totterdell, P., Kellett, S., Teuchmann, K., & Briner, B. B. (1998). Evidence of mood linkage in work groups. *Journal of Personality Social Psychology, 74*(6): 1504-15.

Triandis, H. C. & Lambert, W. W. (1958). A restatement and test of Schlosberg's Theory of Emotion with two kinds of subjects from Greece. *Journal of Abnormal and Social Psychology, 56,* 321-328.

Varma, A., DeNisi, A. S., & Peters, L. H. (1996). Interpersonal affect and performance appraisal: A field study. *Personality Psychology, 49*:341-60.

Venkataramani, V., Green, S. G., & Schleicher, D. J. (2010). Well-connected leaders: The impact of leaders' social network on LMX and members' work attitudes. *Journal of Applied Psychology.* Advanced online publication. doi: 10.1037/a0020214

Vidyarthi, P. R., Liden, R. C., Anand, S., Erdogan, B., & Ghosh, S. (2010). *Journal of Applied Psychology.* Advanced online publication. doi: 10.1037/a0020033

Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment, 6,* 216-226.

Vroom, V. H., Yetton, P. W., & Jago, A. G. (1973). *Leadership and Decision-Making.* Pittsburgh, PA: University of Pittsburgh Press, 1973.

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Wakabayashi, M., Graen, G., Graen, M., & Graen, M. (1988). Japanese management progress: Mobility into middle management. *Journal of Applied Psychology, 73,* 217-227.

Waldman, D. A., Javidan, M., & Varella, P. (2004). Charismatic leadership at the strategic level: A new application of upper echelons theory. *The Leadership Quarterly, 15,* 355-380.

Waldman, D. A., Ramirez, G. G., House, R. J., & Puranam, P. (2001). Does leadership matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty. *Academy of Management Journal, 44,* 134-143.

Wang, X. F. & Howell, J. M. (2010). Exploring the dual-level effects of transformational leadership on followers. *Journal of Applied Psychology, 95*(6), 1134-1144.

Wang, H., Tsui, A. S., & Xin, K. R. (2011). CEO leadership behaviors, organizational performance, and employees' attitudes. *The Leadership Quarterly, 22*(1), 92-105. doi: 10.1016/j.leaqua.2010.12.009

Wayne, S. J., Henderson, D. J., Shore, L. M., Bommer, W. H., & Tetrick, L. E. (2008). Leader-Member Exchange, differentiation, and psychological contract fulfillment: A Multilevel Examination. *Journal of Applied Psychology, 93*(6), 1208-1219.

Weiner, N. (1978). Situational and leadership influences on organization performance. *Proceedings of the Academy of Management:* 230-234.

Weiss, H. M. & Cropanzano, R. (1996). Affective Events Theory: a theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw & L. L. Cummings (Eds.), *Research in Organization*

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Behavior: An Annual Series of Analytical Essays and Critical Reviews, 18:1-74.
Greenwhich, CT: JAI. 373 pp.

Weiten, W. (2004). The Curse of Abundance. *PsychCRITIQUES, 49*(4). doi:
10.1037/040695

Woodsworth, R. S. (1938). *Experimental psychology.* New York: Holt.

Wright, T. A., & Staw, B. M. (1999). Further thoughts on the happy-productive worker.
Journal of Organizational Behavior, 20, 31-34.

Yukl, G. & Van Fleet, D. D. (1992). Theory and Research on Leadership in
Organizations. In M. D. Dunnette & L. M. Hough (Eds.). *Handbook of Industrial
& Organizational Psychology,* second edition, volume 3. Pp. 147-197. Palo Alto:
Consulting Psychologists Press, Inc.

Zaltman, G. (2003). *How Consumer Think.* Boston: Harvard Business Press.

Appendix A

Table 1

List of North American Industry Classification (NAICS) Codes

Company	Industry	Code
AFLAC	Direct Life Insurance Carriers	524113
AGCO	Farm Machinery and Equipment	333111
American Express	Travel Agencies	561510
Anadarko Petroleum	Crude Petroleum and Natural Gas Extraction	211111
Aon	Direct Health and Medical Insurance Carriers	524114
Apache	Crude Petroleum and Natural Gas Extraction	211111
AT&T	Wired Telecommunications Carriers	517110
AutoNation	New Car Dealers	441110
Bank of New York Mellon	Commercial Banking	522110
Becton Dickinson	Surgical and Medical Instrument Manufacturing	339112
Boeing	Aircraft Manufacturing	336411
Chesapeake Energy	Fossil Fuel Electric Power Generation	221112
Comcast	Cable and Other Subscription Programming	515210
ConAgra Foods	Flour Milling	311211
Dell	Electronic Computer Manufacturing	334111
Delta Airlines	Scheduled Passenger Air Transportation	481111
Dow Chemical	Plastics Material and Resin Manufacturing	325211

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Eastman Kodak	Photographic Film, Paper, Plate, and Chemical Manufacturing	325992
Eaton	Relay and Industrial Control Manufacturing	335314
Exelon	Offices of Other Holding Companies	551112
FedEx	Couriers and Express Delivery Services	492110
Ford Motor	Automobile Manufacturing	336111
Goldman Sachs Group	Commercial Banking	522110
Group 1 Automotive	New Car Dealers	441110
Harris	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System, and Instrument Manufacturing	334511
Hertz Global Holdings	Passenger Car Rental	532111
Honeywell International	Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)	331419
Hormel Foods	Animal (except Poultry) Slaughtering	311611
Ingram Micro	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	423430
Intel	Semiconductor and Related Device Manufacturer	334413
Kelly Services	Temporary Help Services	561320
Kimberly-Clark	Sanitary Paper Product Manufacturing	322291
Live Nation	Convention and Trade Show Organizers	561920
Marriott International	Hotels (except Casinos) and Motels	721110
McDonald's	Limited-Service Restaurants	722211
Medco Health Solutions	Pharmaceutical Preparation Manufacturing	325412

Monsanto	Pesticide and Other Agricultural Chemical Manufacturing	325320
NCR	Computer Terminal Manufacturing	334113
Norfolk Southern	Line-Haul Railroads	482111
Owens Corning	Mineral Wool Manufacturing	327993
PNC Financial Services Grp.	Commercial Banking	522110
PPL	Crude Petroleum and Natural Gas Extraction	211111
Public Serv. Enterprise Grp.	Crude Petroleum and Natural Gas Extraction	211111
Ryder System	Truck, Utility Trailer, and RV Rental and Leasing	532120
Starbucks	Snack and Nonalcoholic Beverage Bars	722213
Starwood Hotels & Resorts	Hotels (except Casino Hotels) and Motels	721110
Texas Instruments	Semiconductor and Related Device Manufacturing	334413
TIAA-CREF	Pension Fund	525110
U.S. Bancorp	Commercial Banking	522110
Yum Brands	Full-Service Restaurants	722110

Appendix B

Table 1

ROA and ROE Regression on Lowered Brow with Company Size as a Moderator

Variable	*df*	Pillai's Trace	*F*	*p*
ROA				
Between				
Employees	1		5.43*	.02
Low. Brows	1		0.16	.69
Low. Brows X Empl	1		0.65	.42
Error	43			
Within				
Year	3	0.05	0.66	.58
Year X Employees	3	0.11	1.74	.17
Year X Low. Brows	3	0.05	0.73	.54
Year X Low. X Empl	3	0.13	2.02	.13
Error	41			
ROE				
Between				
Employees	1		4.26*	.04
Low. Brows	1		0.08	.78
Low. Brows X Empl.	1		0.07	.80
Error	44			
Within				
Year	3	0.08	1.20	.32
Year X Empl	3	0.11	1.71	.18

Year X Low. Brows	3	0.07	1.10	.36
Year X Low. X Empl.	3	0.08	1.20	.32
Error	42			

Note. * denotes *p* < .05.

Table 2

ROA and ROE Regression on Happiness with Company Size as a Moderator

Variable	*df*	Pillai's Trace	*F*	*p*
ROA				
Between				
Employees	1		6.41*	.02
Happy	1		0.09	.77
Happy X Empl	1		0.04	.84
Error	43			
Within				
Year	3	0.10	1.55	.22
Year X Employees	3	0.05	0.69	.56
Year X Happy	3	0.10	1.46	.24
Year X Happy X Empl	3	0.03	0.45	.72
Error	41			
ROE				
Between				
Employees	1		6.37*	.02
Happy	1		2.48	.12
Happy X Empl.	1		2.70	.11
Error	44			
Within				
Year	3	0.40	9.19*	.01
Year X Empl	3	0.15	2.53	.07
Year X Happy	3	0.37	8.33*	.00
Yr. X Happy X Empl.	3	0.36	7.89*	.00
Error	42			

Note. * denotes $p < .05$.

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Table 3

ROA and ROE Regression on Sincerity with Company Size as a Moderator

Variable	df	Pillai's Trace	F	p
ROA				
Between				
Employees	1		7.61*	.01
Sincerity	1		0.04	.84
Sincerity X Empl	1		1.52	.22
Error	43			
Within				
Year	3	0.13	2.13	.11
Year X Employees	3	0.04	0.58	.63
Year X Sincerity	3	0.07	1.01	.40
Year X Sinc X Empl.	3	0.03	0.37	.78
Error	41			
ROE				
Between				
Employees	1		8.41*	.01
Sincerity	1		2.68	.11
Sincerity X Empl.	1		3.00	.09
Error	44			
Within				
Year	3	0.30	5.99*	.00
Year X Empl.	3	0.23	4.08*	.01
Year X Sincerity	3	0.24	4.40*	.00
Year X Sinc.. X Empl.	3	0.22	4.03*	.01
Error	42			

Note. * denotes $p < .05$.

Table 4

ROA and ROE Regression on Intensity with Company Size as a Moderator

Variable	df	Pillai's Trace	F	p
ROA				
Between				
Employees	1		5.29*	.03
Intensity	1		2.25	.14
Intensity Squared	1		2.13	.15
Intensity X Empl.	1		1.46	.23
Error	42			
Within				
Year	3	0.02	0.31	.82
Year X Employees	3	0.06	0.89	.46
Year X Intensity	3	0.02	0.28	.84
Year X Intensity Sq.	3	0.02	0.26	.85
Year X Int. X Empl..	3	0.07	0.93	.44
Error	40			
ROE				
Between				
Employees	1		8.70*	.01
Intensity	1		1.03	.32
Intensity Squared	1		2.00	.16
Intensity X Empl.	1		0.04	.84
Error	43			
Within				
Year	3	0.03	0.44	.73
Year X Empl.	3	0.25	4.45*	.01
Year X Intensity	3	0.03	0.38	.77
Year X Intensity Sq.	3	0.04	0.54	.66
Year X Int. X Empl.	3	0.05	0.67	.57
Error	41			

Note. * denotes $p < .05$.

Elizabeth Peyton 6/15/12 2:32 PM
Comment [1]: Changed spacing to 1 here so that the entire table would fit on one page.

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Appendix C

Table 1

ROA and ROE Regression on Lowered Brow with Company Net Worth as a Moderator

Variable	*df*	Pillai's Trace	*F*	*p*
ROA				
Between				
Equity	1		0.31	.58
Low. Brows	1		0.66	.42
Low. Brows X Equity	1		0.85	.36
Error	43			
Within				
Year	3	0.06	0.91	.44
Year X Equity	3	0.18	3.09*	.04
Year X Low. Brows	3	0.13	1.98	.13
Year X Low. X Equity	3	0.36	7.84*	.00
Error	41			
ROE				
Between				
Equity	1		0.19	.67
Low. Brows	1		0.24	.63
Equity X Low. Brows	1		0.01	.92
Error	44			
Within				
Year	3	0.14	2.22	.10
Year X Equity	3	0.08	1.26	.30
Year X Low. Brows	3	0.05	0.71	.55

Year X Low. X Equity.	3	0.06	0.95	.43
Error	42			

Note. * denotes $p < .05$.

Table 2

ROA and ROE Regression on Happiness with Company Net Worth as a Moderator

Variable	*df*	Pillai's Trace	*F*	*p*
ROA				
Between				
Equity	1		0.04	.84
Happy	1		0.81	.37
Happy X Equity	1		0.52	.48
Error	43			
Within				
Year	3	0.16	2.61	.06
Year X Equity	3	0.02	0.24	.86
Year X Happy	3	0.04	0.55	.65
Yr. X Happy X Equity	3	0.19	3.29*	.03
Error	41			
ROE				
Between				
Equity	1		0.00	.98
Happy	1		0.43	.52
Happy X Equity	1		2.18	.15
Error	44			
Within				
Year	3	0.32	6.52*	0.00
Year X Equity	3	0.02	0.24	.86
Year X Happy	3	0.09	1.40	.26
Yr. X Happy X Equity.	3	0.13	2.07	.12
Error	42			

Note. * denotes $p < .05$.

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Table 3

ROA and ROE Regression on Sincerity with Company Net Worth as a Moderator

Variable	*df*	Pillai's Trace	*F*	*p*
ROA				
Between				
Equity	1		0.01	.91
Sincerity	1		0.01	.91
Sincerity X Empl	1		0.07	.79
Error	43			
Within				
Year	3	0.15	2.36	.09
Year X Equity	3	0.02	0.27	.84
Year X Sincerity	3	0.08	1.18	.33
Year X Sinc. X Equity	3	0.20	3.35*	.03
Error	41			
ROE				
Between				
Equity	1		0.30	.59
Sincerity	1		0.08	.78
Sincerity X Equity	1		0.36	.55
Error	44			
Within				
Year	3	0.44	10.82*	.00
Year X Equity	3	0.04	0.61	.61
Year X Sincerity	3	0.12	1.88	.15
Year X Sinc.. X Equity	3	0.10	1.52	.22
Error	42			

Note. * denotes *p* < .05.

Table 4

ROA and ROE Regression on Intensity with Company Net Worth as a Moderator

Variable	df	Pillai's Trace	F	p
ROA				
Between				
Equity	1		0.15	.70
Intensity	1		1.34	.25
Intensity Squared	1		1.23	.27
Intensity X Equity	1		.31	.58
Error	42			
Within				
Year	3	0.05	0.63	.60
Year X Equity	3	0.06	0.87	.46
Year X Intensity	3	0.04	0.63	.60
Year X Intensity Sq.	3	0.04	0.61	.61
Year X Int. X Equity	3	0.12	1.83	.16
Error	40			
ROE				
Between				
Equity	1		0.31	.58
Intensity	1		1.39	.24
Intensity Squared	1		1.48	.23
Intensity X Equity	1		0.01	.93
Error	43			
Within				
Year	3	0.05	0.65	.59
Year X Equity	3	0.06	0.86	.47
Year X Intensity	3	0.04	0.55	.65
Year X Intensity Sq.	3	0.04	0.58	.63
Year X Int. X Equity	3	0.02	0.27	.84
Error	41			

Note. * denotes $p < .05$.

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