# The emotional link: Leadership and the role of implicit and explicit emotional contagion processes across multiple organizational levels

Eugene Y.J. Tee *

*Department of Psychology, HELP University, 50490, Kuala Lumpur, Malaysia*

## ARTICLE INFO

## ABSTRACT

Emotional contagion processes influence a wide range of organizational and leadership outcomes. In this paper, I review emotional contagion research as it relates to multiple levels of analysis within an organization and discuss the extent to which this process can be managed by leaders. The review begins with an explanation of the processes underpinning the emotional contagion process, highlighting the neurological mechanisms that give rise to implicit and explicit forms of emotional contagion. In the following section, I discuss some individual differences that moderate the experience of these two forms of emotional contagion. Subsequently, I review how emotional contagion processes impact leadership outcomes at the interpersonal, group and finally, organizational levels. The purpose of the current review is threefold. The first is to refine understandings of the emotional dynamics of leadership influence from a neurological perspective, highlighting how implicit and explicit emotional contagion underpins much of leader-follower interactions. Second, the review extends on conceptualizations of emotional contagion in leadership interactions often captured at the interpersonal level, and illustrates how the process is relevant in influencing group level organizational leadership outcomes. Third, the review also highlights themes emerging from this area of research, and concludes with directions for further research. Ultimately, the review aims to show how emotional contagion processes are implicated as the 'emotional links' across multiple levels in organizations and organizational leadership.

© 2015 Elsevier Inc. All rights reserved.

## Introduction

More than two decades after its conception, the process of emotional contagion remains pertinent and crucial in understanding key affect-related processes in organizations. Emotional contagion, defined by Hatfield, Cacioppo, and Rapson (1994, p.5), is the "tendency to automatically mimic and synchronize facial expressions, vocalizations, postures and movements with those of another person and, consequently, to converge emotionally". While conceptualized based on the authors' interactions with clients within a clinical setting, emotional contagion processes have been applied to organization contexts, notably in studies of team and leadership processes. In this paper, I review key research findings from psychological research to highlight how emotional contagion is central to many affect-related processes and theories related to organizational member interactions. These include empathy, emotional labor, charismatic leadership and social identity theory. I propose, however, that the role that emotional contagion plays in these organizational interactions can be more clearly understood by properly delineating the different organizational levels in which these processes are contained. I also propose that a better understanding of the impact of emotional contagion in organizations can be better achieved

---

* Tel.: +60 3 20942000; fax: +60 3 20957100.
 *E-mail address:* teeyj@help.edu.my.

by differentiating between implicit and explicit emotional contagion mechanisms. To meet these goals, I begin by first reviewing several multi-level models of emotions in organizations. I then review the main themes emerging from the review of extant research on emotional contagion-related processes in organizations, and subsequently suggest directions for further research.

## Multi-level models of emotion in organizations

Ashkanasy's (2003) multi-level model of emotion in organizations represents a key theoretical development in conceptualizing emotional processes across multiple levels of analysis. In this model, emotion processes are categorized as belonging to one of five levels – within-person, between-persons, interpersonal interactions, groups, and organization-wide. The model has been subsequently adapted to explain multi-level processes for specific affective processes in organizations, such as emotional labor (Ashkanasy & Humphrey, 2011) and positive emotions in organizations (Ashkanasy & Ashton-James, 2007). Other multi-level models advancing theoretical grounds in this area also provide insights into the ephemeral nature of emotions and how they are transferred across different organizational levels. This is consistent with the notion that emotions can transcend formal organizational structures and hierarchies – a point argued by Hareli and Rafaeli's (2008) model of 'emotion cycles' within organizations, and Dasborough, Ashkanasy, Tee, and Tse's (2009) multi-level model of negative emotional contagion effects in organizations. In this review, I employ a five-level model, consisting of the (1) intrapersonal, (2) between-persons, (3) interpersonal, (4) group and (5) organizational levels. These five levels are as per Ashkanasy's (2003) multi-level model, but also incorporate ideas from various theoretical models to explain how emotional contagion processes shape organizational and leadership outcomes.

In effect, this review aims to show that emotional contagion processes are implicated in both bottom-up (micro-level, within and between-person factors) and top-down (macro-level, group and organizational processes) influences on organizational outcomes (Barsade & Gibson, 1998). In addition, I differentiate between implicit and explicit emotional contagion processes in this review. I argue for the importance of this distinction, suggesting that it is vital that scholars and practitioners delineate between emotional contagion processes that are subtle influences in leader-follower interactions, from those more explicit, deliberate processes that can be actively managed by leaders. Further, the propositions presented in this paper extend on conceptions of emotional contagion as a process constrained solely at the interpersonal level of analysis, and argues that it is a process that can be managed by leaders.

## Level 1: within-persons level – underlying processes leading to emotional contagion

### Motor mimicry and synchrony

The process of emotional contagion relies on two key underlying mechanisms - mimicry and synchrony, and emotional experience and feedback. Research examining these mechanisms have focused almost exclusively within the behavioral realm, with the view that mimicry of others' behavioral cues is central towards emotional convergence and synchrony (Arizmendi, 2011). This hypothesis, referred to as the mimicry-feedback hypothesis, suggests that emotional contagion is largely automatic and subconscious, and that the mimicry of an observed individuals' facial or bodily musculature results in a convergence of emotional states (Lishner, Cooter, & Zald, 2008). Mimicry, and resulting synchrony of emotional states is observed in various studies (Chartrand & Bargh, 1999; Dimberg, 1982; Trout & Rosenfeld, 1980). Mimicry of others' behaviors tends to result in increased liking between interacting individuals (Guéguen & Martin, 2009; McIntosh, 2006) and closeness to the interaction partner (Stel & Vonk, 2010), consistent with the influence of behavioral mimicry in meeting evolutionary-driven needs of connecting and bonding with others. These processes have also been examined prior to Hatfield et al. (1994) introduction of emotional contagion theory.

Studies of motor mimicry and synchrony mechanisms also highlight the potency of facial expressions in leading to shared emotions between individuals. Laird (1974) and Adelmann and Zajonc (1989) argued that the human face represents the most dominant and accurate communicator of emotions. Indeed, Haase and Tepper (1972) showed that facial expressions communicated positive emotions one and a half times better than vocal or postural cues. Similarly, DePaolo, Rosenthal, Eisenstat, Rogers, and Finkelstein (1978) suggested that the effectiveness of communication between individuals is severely diminished in the absence of visual, facial stimuli. Wild, Erb, and Bartels (2001) and Neumann and Strack's (2000) laboratory studies showed that individuals are able to perceive others' emotional faces rapidly, suggesting that the motor mimicry mechanisms prompt largely unconscious imitations of others' emotion states through facial expressions. Hess, Philippot, and Blairy (1998) were one of the first to examine these underlying emotional contagion processes using facial electromyography (EMG). Results from their study showed that facial mimicry occurs only when affective judgments of another are required. In a subsequent study, Blairy, Herrera, and Hess (1999) showed that participants spontaneously mimic the emotional facial expressions of others, hypothesizing that spontaneous mimicry of facial cues facilitates an understanding of another's emotional states.

There have, however, been studies showing that voluntary mimicry of observed facial emotional cues are not associated with the improved ability to decode observed facial emotions. Results from the two studies above (Blairy et al., 1999; Hess et al., 1998) highlight a crucial feature of the emotional contagion process – first, that the mimicry of others' facial expressions is insufficient in leading to an understanding of another's emotional state. This subsequently raises the possibility that other processes may be needed to account for the convergence of emotions between individuals, rather than just mere mimicry. Tamietto et al. (2009), for example, showed that emotional contagion processes are not strictly based on motor mimicry, or by conscious visual recognition of another's emotion cues alone. Thus, this primitive motor mimicry system is by itself insufficient in understanding how individuals converge towards a shared emotional state. Singer and Lamm (2009) suggest that motor mimicry may not necessarily lead to emotional contagion, and likewise, emotional contagion does not depend solely on motor mimicry. A more complete depiction of the emotional

contagion mechanism involved in the emotional experience and feedback process emerges from research examining the neurological bases underlying the communication and convergence of emotions between interacting individuals.

*Emotional experience and feedback: mirror neurons and theory of mind*

Lee, Dolan, and Critchley (2008, p.109) suggest that emotional contagion processes may work via a "combination of emotional, motoric, cognitive and evaluative channels". Advances in neuroscience research provide evidence particularly for brain-related processes that lead to emotional contagion. Arguably the most significant finding from this domain of research is the discovery of the mirror neuron system (MNS) – a subset of multimodal neurons which activate when an individual observes another's actions, as if the observer were performing the action themselves (Arizmendi, 2011). Shamay-Tsoory (2011) suggests the MNS as the neurological mechanism underlying motor mimicry, empathy, and consequently, emotional contagion. Results from this merging area of research does provide a neurological explanation for why interacting individuals converge on a similar emotional state. Emotional convergence, based on activation of the MNS, extends the explanatory mechanisms for emotional contagion deriving solely from motor mimicry (facial feedback mechanisms in particular), and explains why individuals vicariously experience the emotions of others. Discovery of the MNS has also proven pivotal in explaining the neural pathways and mechanisms leading to empathy. Parallel to these findings is the Theory of Mind (ToM), which Shamay-Tsoory (2011) suggests is an ability to mentalize another's emotions in order to facilitate understanding of another's perspective. In effect, the ToM is supported by the underlying mirror neuron structure of our brains, which enables us to *consciously*, and vicariously feel the emotions expressed by another individual.

A review of the existing research suggests that the more primitive mechanism driving emotional contagion is based mainly on motor mimicry processes. These processes are rapid, efficient, subconscious, but rigid (Decety, 2011). Conversely, the second component of the emotional contagion process - emotional experience and feedback, appear to be better explained by mirroring of emotions based on complex neurological processes. These processes facilitate coordination and cooperative functions in complex, social organisms (de Waal, 2008). Decety (2011) adds that the emotional experience and feedback mechanism confers greater behavioral flexibility and variability, and can thus be consciously regulated. Both these processes are interrelated, and needed to understand emotional contagion processes in its entirety (Moody, McIntosh, Mann, & Weisser, 2007).

This new line of evidence concerning the neural mechanisms of emotional contagion and empathy suggests that individuals may consciously be aware of, and regulate the extent to which they wish to share in another's affective state. Preston and de Waal (2002) argued that while primitive emotional contagion and mimicry requires little conscious effort and cognitive processing, it is not in an individual's benefit to feel the emotions expressed by others all the time. In the context of leadership, therefore, it seems plausible to suggest that leaders may not benefit from empathizing with every single individual follower. Being influenced by, or deliberately sharing in followers' affective states may result in leaders being overwhelmed by followers' emotions, effectively impeding leadership effectiveness. The concept of 'compassion fatigue' is relevant here, and suggests that leaders who take on too much of others' emotions are liable to experience burnout (Boyatzis, Smith, & Blaize, 2006). In view of this, Decety and Lamm (2006) and Decety and Jackson (2006) propose that individuals have developed regulatory and appraisal mechanisms which modulate the extent to which they empathize with others. De Vignemont and Singer (2006) suggest that when we observe another's emotions, we may not necessarily, nor automatically mean experience the emotions experienced by others. This raises a crucial point regarding emotional contagion processes – that they are not exclusively 'automatic', subconscious processes that bypass individual-level appraisal and context-dependent interpretations. Shamay-Tsoory, Aharon-Peretz, and Perry (2009) study supports this assertion, providing neuroanatomical evidence that humans have two interrelated, overlapping routes to empathy – an emotional system involving the MNS that serves as an expedient process to quickly match and mimic the emotions of others, and a cognitive system, that serves as a more complex mechanism to facilitate understanding of another's situation through perspective-taking. These different neurological routes may form the basis for differentiating between emotional and cognitive forms of empathy, though these within-person variations may also vary and change over time for both leaders and followers (Shamay-Tsoory et al., 2009). Studies employing fMRI further support the proposition that our underlying neural mechanisms allow individuals to regulate our mimicry tendencies (Cross & Iacoboni, 2014; Cross, Torrisi, Reynolds Losin, & Iacoboni, 2013). Indeed, regulation of emotional contagion processes provides an explanation of how individuals authentically empathize with one another (Hatfield, Rapson, & Le, 2008), and the extent to which individuals choose to be influenced by the emotions of others.

In light of these new findings, a distinction therefore needs to be made to differentiate the primitive, tacit, implicit emotional contagion processes, driven primarily by subconscious, automatic motor mimicry from the more explicit processes which can be regulated in human interactions. A review of the emotional contagion literature in organizational leadership research suggests that researchers tend to operationalize emotional contagion processes primarily from its primitive, implicit component aspect, as per Hatfield et al. (1994) original definition of the term. Hatfield, Cacioppo, and Rapson (1992); Hatfield et al. (1994) do make the distinction between the higher-order sophisticated forms of emotional contagion (which facilitates perspective-taking and empathy) with the more primitive, subconscious process of emotional contagion driven by primarily by motor mimicry mechanisms. However, such distinctions, as will be subsequently highlighted in this paper, are not always clearly distinguished in organizational leadership research. In view of the complementary, but overlapping mechanisms by which emotional contagion occurs, it can be proposed that:

**Proposition 1a.** Implicit emotional contagion processes are based on largely tacit, automatic processes. These processes form the neurological basis for the automatic sharing of affect in leaders and followers.

**Proposition 1b.** Explicit emotional contagion processes are based largely on conscious, deliberate processes. These processes form the neurological basis for the purposeful transfer of affect in leaders and followers.

A review of these recent studies suggests that there is a strong neural underpinning and foundation for influence. In particular, emotional information processed by individual neural circuitry shapes resulting follower perceptions and actions towards their leaders. These processes, tacit and underlying the interaction process, are key to understanding the mechanics of influence. Theoretically, they underscore the importance of paying attention to the neuropsychological processes that underlie influence, in particular, how emotional information is perceived by, and processed by the brain. Both implicit and explicit emotional contagion routes, underpinned by these tacit neural processes, provide explanations for how influence between leaders and followers may occur as a normal part of leader-follower interaction (i.e. implicit emotional contagion), or through a more deliberate and actively managed route by the leaders or followers (i.e. explicit emotional contagion).

These findings provide a more nuanced understanding of leadership influence attempts, and augment understanding of key leadership theories. For instance, mimicry and synchrony between leader and follower expressions of emotion may be what underlies authentic leadership experiences, and what Boyatzis and McKee (2013) refer to as resonant relationships. Authentic leadership theory, (Avoilio & Gardner, 2005; Ladkin & Taylor, 2010) for instance, may be further strengthened by the knowledge that effective influence attempts are first and foremost forged at the neurological level. These processes revolve around brain-centered processes that, while being tacit and largely subconscious, are the basis for leader influence effectiveness and follower receptiveness of such influence attempts.

It is acknowledged that much remains under-researched in understanding the neural underpinnings of effective leadership. Further, such approaches to understanding leadership interactions are not without its critics. Lindebaum and Zundel (2013), for instance, have raised concerns that leadership theories based on neuroscientific research evidence are based heavily on reductionist assumptions. Such concerns are valid, given the rich, dynamic and social nature of leadership that cannot be fully, or accurately captured if one adopts a minimalist, micro-level approach towards building leadership theories. In response, Ashkanasy (2013) agrees that these concerns are valid, but that researchers do need to allow time for the field to mature further. The authors suggests that in view of evidence from well-conducted laboratory studies, it will become increasingly apparent that leadership processes have clear, evident neurological bases. Concerns regarding the reductionist tendencies of neuroscience may be addressed by research that considers how these micro-level processes link with, and impact leadership processes at other levels. These neurological foundations of leadership influence are therefore crucial antecedents that explain the influence processes at subsequent levels of analyses.

**Proposition 1c.** The basis for influence is reliant on tacit neural underpinnings. Leaders who understand these processes are better able to (1) understand and be aware of implicit emotional contagion processes influencing leadership outcomes and (2) manage the explicit emotional contagion processes influencing leadership outcomes.

*Level 2: between-persons: individual differences in susceptibility and expressivity*

*Susceptibility to emotional contagion: empathy, personality and trait affectivity*

At this level of analysis, the focus turns to individual-level differences that influence susceptibility to emotional contagion. While the inherent, hardwired evolutionary mechanisms discussed in the preceding level are common across all individuals, variability in terms of affect susceptibility may influence the extent to which individuals are susceptible to others' emotions. In this sub-section, two areas of research are reviewed – those that focus on individual susceptibility to emotional contagion, and those that examine the link between personality and affect. These two individual-level, between-persons differences are found to moderate the extent to which individuals are affected by emotional contagion processes.

Doherty (1997, p.134) developed and validated the first measure of susceptibility to emotional contagion (EC scale), which is defined as "the frequency with which emotional stimuli elicit an emotional expression characteristic of the eliciting emotion". This 15-item scale has subsequently been used in studies examining emotional contagion processes both within laboratory (Wild et al., 2001), and field settings (Ilies, Wagner, & Morgeson, 2007; Johnson, 2008). This individual difference was also examined by Verbeke (1997) in his study of Dutch salespersons, in which the author showed that salesperson high in terms of emotional contagion susceptibility but low in ability to transmit their own emotions to others were more likely to perform better in their roles. The author also proposed that these salespersons, termed 'empathetics', were also more susceptible to burnout. This is consistent with Doherty's (1997) findings in which the author found correlations between individual responses to the EC scale with emotional (rather than cognitive) modes of empathy. These studies show that differences in emotional contagion susceptibility also influence individual capacity for affective empathy, and may be a key individual difference which influences the extent to which individuals are influenced by others' emotions. They would further imply that being high in susceptibility to emotional contagion may allow one to empathize better with others, but may also cause individuals to be overwhelmed by the emotions of those they interact with (Doherty, Orimoto, Singelis, Hatfield, & Hebb, 1995). In a study which predates the development of the EC scale, Doherty et al. (1995) examined gender differences in susceptibility to emotional contagion. The authors found that women were more likely to be susceptible to emotional contagion than men, consistent with Hatfield et al. (1994) theorizing that such differences were a result of gender socialization processes. It should nonetheless be noted that the elevated levels of emotionality in women may also be dependent on situational and contextual factors (Feldman Barrett, Robin, Pietromonaco, & Eyssell, 1998). Finally, studies also show that individual differences in empathy also influence facial mimicry reactions, evidencing links between motor mimicry and capacity for empathy. Sönnby-Borgström, Jönsson, and Svensson (2003) for instance, showed that high-empathy individuals displayed immediate, automatic facial mimicry reactions that were not apparent in low-empathy individuals. Individual differences in empathy were also found to influence individual sensitivity to facial feedback processes (Andréasson & Dimberg, 2008) and empathic accuracy (Dimberg, Andréasson, &

Thunberg, 2011). Individuals high on emotional empathy were more likely to be sensitive towards, and were more accurate in their assessment of others' facial emotional expressions.

Susceptibility to specific types of affect may also be influenced by individual personality differences, and may have some neurological basis (Canli et al., 2001; Davis & Panksepp, 2011; DeYoung et al., 2010; Hagemann et al., 1999). In this regard, it is useful to consider research examining the link between personality and affect, and how these may too, influence receptivity of affect. Research specifically within the organizational leadership domain has linked the Big Five personality typology, with effective leadership outcomes (Hogan, Curphy, & Hogan, 1994; Hogan & Kaiser, 2005; Zaccaro, 2007). Certain personality traits do influence a leader's style of leading, evident from Judge, Bono, Ilies, and Gerhardt (2002) meta-review showing that extraversion, neuroticism, openness to new experiences and conscientiousness were all correlated with specific leadership outcomes. Of these traits, extraversion and neuroticism have been found to be consistent predictors of individual susceptibility to pleasant, and unpleasant affect. Extraversion refers to an individual personality trait which predisposes an individual towards being gregarious and outgoing, and inclining them to engage in social interactions (Lucas & Deiner, 2001; Lucas & Fujita, 2000). Trait extraversion is motivated by a behavioral approach system that drives individuals to seek out situations likely to enhance their psychological well-being. Consequently, extraverted individuals are more likely to be reactive towards pleasant, positive events than their introverted counterparts (Robinson, Solberg, Vargas, & Tamir, 2003; Smillie, Cooper, Wilt, & Revelle, 2012). While often associated with sociability, trait extraversion is more accurately defined as an inclination to experience, and to express more positive affect (Lucas & Fujita, 2000; Watson & Clark, 1997). Lucas and Deiner (2001) showed that extraverts only rated their moods within social interactions in positive light when the overall situation was considered to be pleasant.

Conversely, individuals scoring high on trait neuroticism are more likely to be susceptible to negative affect (Bolger & Schilling, 1991; Eid & Diener, 1999; Watson & Clark, 1984). In contrast with trait extraversion's approach orientation, trait neuroticism predisposes individuals towards more inhibitive behaviors, leading them to experience elevated levels of negative affect, anxiety, and diffidence (Morossanova, 2003). Zelenski and Larsen (1999) also state that high-neurotic individuals also tend to engage in negative, unproductive cognitive behavior, while Robinson, Wilkowski, Kirkeby, and Meier (2006) showed that high neurotic individuals were more prone to engage in ruminative behavior upon experiencing a negative situation. The links between leader personality and leadership outcomes have recently been re-examined through a series of meta-reviews (Bono & Judge, 2004; Judge & Bono, 2000; Judge, Piccolo, & Kosalka, 2009; Judge et al., 2002). These reviews suggest the utility and importance of considering how leader trait affectivity influences the effectiveness of leaders, and underscore the need to factor in these between-person differences in understanding contagion susceptibility inherent in leadership interactions. These individual differences moderate the extent to which individuals are receptive of, positive and negative affect, leading to differing levels of susceptibility to follower affect (Tee, Ashkanasy, & Paulsen, 2013). In view of these individual differences moderating leader susceptibility to implicit emotional contagion processes, it is proposed that:

**Proposition 2a.** Between-persons differences influence the extent to which leaders are susceptible to implicit emotional contagion processes. These individual-level differences include general susceptibility to emotional contagion, empathy, as well as the extraversion and neuroticism personality traits.

*Expressivity of emotions: gender, personality and leadership styles*

A noteworthy observation from this level is that much of the research appears heavily focused on factors leading to individual susceptibility to affect, rather than the capacity to express and influence others with emotion. That is, we appear to know more about how personality affects leaders' susceptibility to different types of affect, but less so about the individual differences that influence leaders' ability to influence others through emotion. Eagly, Johannesen-Schmidt, and Van Engen (2003) suggest gender differences as having an influence on leadership style, particularly when leaders' expressions of emotions are especially important. In their meta-analysis, the authors found that women exhibit greater transformational leadership styles compared with men. This may be in part be due to women's' elevated empathic abilities, willingness to express, and subsequently, transmit emotions in order to achieve leadership outcomes – all of which contribute to key aspects of transformational leadership (Bass, Avolio, & Atwater, 1996).

The ability and propensity to influence follower emotion may also shape the different leadership styles adopted by leaders on the basis of their personalities (Rubin, Munz, & Bommer, 2005). Strictly speaking, while these are not *inherent* individual or personality differences, they are worth mentioning given that much research has established links between personality and leadership styles. Personality traits such as agreeableness (Judge et al., 2002) for instance, has been found to be predictive of more charismatic leadership styles, while extraversion is predictive of a leader's tendency to express positive emotions (Bono & Judge, 2004). Crant and Bateman (2000) showed that a proactive personality was predictive of followers' perceptions of charisma in a leader, while studies by Sy, Choi, and Johnson (2013) and Ilies, Curşeu, Dimotakis, and Spitzmuller (2013) show the impact of leader emotional expressiveness in enhancing follower perceptions of leader idealized influence. Given charismatic leaders' tendency of relying on emotional appeals and use of explicit emotional contagion processes to influence followers (Bono & Ilies, 2006), it can be proposed that between-person differences in leader personality also influences their tendency to rely on, or use explicit emotional contagion processes as a mechanism for influence. The established links between studies of leader personality and their leadership styles suggest that leadership influence attempts rely substantially on leader personality, and that inherent individual differences in leaders play out in their style of influence. As such, leader personality may not only moderate leader susceptibility to follower affect, but also the extent to which they use emotional appeals to influence followers through explicit emotional contagion processes. Considering the link between leader personality and leadership style, it is proposed that:

**Proposition 2b.** Between-persons differences influence the extent to which leaders are likely to use explicit emotional contagion processes as a basis for their influence and leadership style. These individual-level differences include gender, extraversion, agreeableness and expressivity.

*Level 3: interpersonal interactions: emotional contagion in leader-follower interactions*

*Emotional labor: affective displays as explicit emotional contagion*

Emotional contagion processes at the third level of analysis consists of interactions and the exchange of affect between individuals. The majority of emotional contagion research is contained within this level of analysis. Building on the evidence which suggests that emotional contagion processes are not exclusively tacit, subconscious and automatic allows us to consider how the transfer of emotions from leaders to followers may instead be deliberate, with the intention of attaining certain interaction or task outcomes. This raises key considerations and implications for leadership, in that leaders can actively manage the emotional dynamics of a particular situation through explicit emotional contagion processes. One body of research which captures the dynamics of these rather 'deliberate' emotional exchanges is studies of emotional labor. Defined in Hochschild's (1983) seminal work 'The Managed Heart', emotional labor involves the expression of socially desired emotions during service interactions. In effect, the enactment and expression of such emotions, as per job and task requirements, relies on an effortful attempt in creating the necessary emotional state for oneself, and towards others, for the interpersonal interaction to be considered appropriate and successful. It is the latter function of engaging in such forms of emotion work, which is consistent with the proposition that emotional contagion processes can be consciously and explicitly enacted to facilitate task and interaction outcomes. To date, research on emotional labor has been conducted predominantly within service interactions. Pugh (2001), for example, shows that emotional contagion processes underlie the exchange of customer-client interactions, and that shared emotions between customers and clients impact perceptions of service quality judgments of customers. Tsai and Huang (2002) highlight that emotional contagion processes underlie the delivery of desired affective states, and that successful expressions of desired affect by service providers can influence customer satisfaction and perceptions of service quality. Clients' expressions of emotions were also shown to impact service provider emotion states, as in Tan, Foo, and Kwek's (2004) observational study, suggesting reciprocity of emotional exchanges between clients and service providers. Grandey (2003) adds that service providers' ability in delivery of affect is strongly associated with their ability to engage in deep acting, which involves regulating their internal affective states in order to match outward, observable expressions of emotions.

Not all studies in this domain, however, show that the transfer of affect between interaction partners in service settings is guaranteed to occur. Research examining emotional contagion and emotional labor processes in tandem paint a more complex relationship. Barger and Grandey (2006), for instance, shows that there was no relationship between employee smiling and customer mood, negating support for any form of emotional contagion or affect infusion. Hennig-Thurau, Groth, Paul, and Gremler (2006) likewise, suggest that primitive motor mimicry was not implicated in causing customers to catch positive emotions from their service providers. Grandey, Fisk, Mattila, Jansen, and Sideman (2002) note that authenticity of expressed positive emotions through service provider smiles may be one factor that moderates how much customers are influenced by positive affect expressed by service providers. These findings are noteworthy in suggesting that at this level of interaction, contextual factors such as job roles and display rules associated with those jobs further moderate the extent and intensity of emotional contagion influences in interpersonal interactions. The findings do suggest that differential levels of surface or deep acting, necessitated by the job role, either elevates, or diminishes the extent to which service providers are able to *authentically* transfer their emotions to others. Differences in display rule commitment (Gosserand & Diefendorff, 2005), identification with the job (Ashforth & Humphrey, 1993) and extraversion (Chi, Grandey, Diamond, & Krimmel, 2011; Judge, Woolf, & Hurst, 2009) are some of the additional factors that moderate the extent to which service providers are able to express desired emotions towards clients.

The concept of emotional labor has more importantly, been applied towards the understanding of organizational leadership, particularly with regards to how leaders symbolically manage the affective elements of teams (Ashkanasy, 2003). Gardner, Fischer, and Hunt (2009) propose that regulated displays of affect are an important consideration in influencing followers' perceptions of leader authenticity and trust. This point is consistent with Ashkanasy and Humphrey (2011) suggestion that leaders need to both engage in self-regulation of their own emotions, along with managing their own emotion expressions towards followers as part of their leadership roles. Propositions put forth by Humphrey, Pollack, and Hawver (2008) underscore the importance of emotional labor in leadership. These authors suggest that regulation of emotions is crucial to leadership effectiveness, particularly when situational demands require leaders to both manage their own emotions, and express emotions which suit the circumstances the organization is in. As such, it can be proposed that:

**Proposition 3a.** Emotional contagion underlies the process by which leaders engage in emotional labor. In addition to regulating their own emotions (i.e. managing the effects of implicit emotional contagion), effective leaders also regulate expressions of emotion to followers (i.e. managing the effects of explicit emotional contagion) in order to enhance authenticity, credibility and leadership effectiveness.

*Emotional contagion in leadership: leader-follower exchange of emotions*

Another stream of research examines directly the impact of emotional contagion processes within leader-follower interactions. Sy, Côté, and Saavedra (2005) and Volmer (2012) show that leaders' mood can influence follower mood through contagion processes,

impacting individual-level follower mood, group-level mood and performance.[1] In a recent study, Sy and Choi (2013) showed how mood contagion processes occur in two stages – starting from moods triggered by leaders, which are then transferred to, and propagated among followers at the group level. Johnson (2008) showed that emotional contagion from leaders to followers also impacted followers' perception of leader charisma and their organizational citizenship behaviors. Eberly and Fong (2013) illustrate that followers' attributions of leader sincerity and effectiveness were also influenced by the emotions they share with their leader. Notable in the review of this area is the acknowledgement that the transfer of positive affect from leaders to followers is a crucial process influencing perceptions of leader charisma. Johnson (2009) highlights that followers' positive mood, in comparison with negative mood, was especially influential in forming perceptions of leader charisma. Indeed, the transfer of positive emotions from leaders to followers is almost ubiquitously used to explain why followers perceive certain leaders as being charismatic or adopting transformational leadership styles (Bono & Ilies, 2006; Cheng, Yen, & Chen, 2012; Cherulnik, Donley, Wiewel, & Miller, 2001; Chi, Chung, & Tsai, 2011; Erez, Misangyi, Johnson, LePine, & Halverson, 2008; Walter & Bruch, 2007; Wang, Oh, Courtright, & Colbert, 2011).

The evidence put forth by these studies highlight how explicit emotional contagion processes serve as an important mechanism for leadership influence, and links with the previous level of analysis suggesting a relationship between leader personality and leadership style. The effectiveness of leaders – charismatic leaders, in particular, is thus strongly reliant on their ability to express, and influence followers with the context-appropriate affect in order to motivate follower action towards desired outcomes. Conger and Kanungo (1998), Bass (1985) and Awamleh and Gardner (1999) explain that expression of positive emotions by charismatic leaders may partly be based on their enhanced ability to manage their presentations, impressions and audience demands. These claims are furthermore consistent with propositions relating to the importance of emotional labor in leadership discussed in the preceding section. In the context of this review, how a leader manages emotional contagion processes – positive affect, in particular, has a strong influence on their capacity to influence others and for managing followers' perceptions of their charisma. Accordingly, Pastor, Mayo, and Shamir (2007), show that it is followers' favorable attributions of leaders, fuelled by the contagion of positive emotions from leaders to followers, which gives rise to attributions of leader charisma. Venus, Stam, and van Knippenberg (2013) showed that communication of enthusiasm by leaders to followers led to elevated motivational intentions of their followers. A study by Visser, van Knippenberg, van Kleef, and Wisse (2013) demonstrates that leaders' expressions of emotions affected follower task performance. In this study, expressions of happiness enhanced followers' creative performance, while expressions of sadness enhanced followers' analytical performance. Another area of research showing the impact of leader to follower emotional contagion relates to 'entrepreneurial passion' (Cardon, 2008; Cardon, Wincent, Singh, & Drnovsek, 2009). Drawing links between entrepreneurial leadership and transformational leadership behaviors, the authors propose that skillful and appropriate expressions of both positive and negative emotions by leaders can impact followers' feelings of passion and commitment towards the firm. Cardon (2008) however, states that emotional contagion processes are by themselves insufficient for eliciting this organization-wide feeling of passion, and proposes that a collective, shared sense of identification with the goal and team are also crucial in arousing group-level entrepreneurial climate. Implied in these studies is the suggestion that management of explicit emotional contagion processes is essential for leadership effectiveness, henceforth the following proposition:

**Proposition 3b.** Management of explicit emotional contagion processes is essential for leadership effectiveness. Emotional contagion processes from leaders to followers influence a wide range of team and leadership outcomes, and is particularly relevant in understanding the influence of charismatic and transformational leaders.

Notable in this area of research is that most studies conceptualize leadership influence as being unidirectional – in that leaders have more opportunity to influence the mood of leaders, rather than the inverse. Given the social nature of leadership, however, more research can focus on how followers themselves influence leader mood and leadership outcomes. Tee et al. (2013); Tee, Paulsen, and Ashkanasy, (2013) suggest that emotional contagion processes may have been operative in their laboratory study on why followers' mood influenced leader performance on a cognitively-demanding task. Considerably less research has focused on this particular direction of influence, despite reiterated calls for follower-centric research to understand how followers themselves shape leadership outcomes (Bligh, 2011; Gooty, Connelly, Griffith, & Gupta, 2010; Uhl-Bien, Riggio, Lowe, & Carsten, 2014). Thus, the existing evidence in this area predominantly suggests that leaders can influence follower and team outcomes through explicit emotional contagion processes, and this is especially evident in transformational and charismatic leadership theory. Given the social nature of leadership interactions, however it would be plausible to also argue for the reverse – that followers can influence leaders through their expressions of emotions.

At level 3, given that leaders and followers are situated within a social context that allows them to mutually influence one another, it is argued that the leadership process is one of mutual influence. That is, leaders influence followers through implicit and explicit emotional contagion processes, and are in turn influenced by followers' emotions – also via implicit and explicit routes. Emotional labor processes are one such way in which leaders can use explicit emotional contagion processes to influence followers. Likewise, the research also suggests that implicit processes have a subtle effect on follower mood and behaviors (e.g. Sy et al., 2005). What is

---

[1] Research contained within this area has also at times examined the impact of leader mood on group-level outcomes. Sy et al. (2005) experimental study, for instance, shows how leaders' mood influences group-level mood. Hence, there appears to be somewhat of an overlap between researches placed within this level from that of the following level – the group-level. I propose, however, that research findings from this level are better placed at the interpersonal level, as opposed to the group-level. This is because findings from these studies provide evidence that a leader can influence the affect of multiple followers, and thus still constitutes an interpersonal exchange of emotions. In the following section, the group-level, I show how leaders construct and shape group-level affect and identity, and propose that studies at that level, are more reflective of how leaders shape group-level outcomes such as affective climate and identity. Further, I will propose in the discussion session that cross-level interactions are also means by which factors from different levels of analysis can in fact interact in shaping outcomes at higher levels of analysis.

less understood, however, are the implicit and explicit emotional contagion processes of followers' influence on leader affect and behavior. Follower-centric studies (e.g. Tee et al., 2013; Tee et al., 2013) illustrate a mostly implicit process of follower to leader influence. It is not implausible, however, to suggest that followers themselves can intentionally and deliberately make use of explicit displays of emotion to influence leadership outcomes. Such instances may occur within the context of the group, and dependent on situational, contextual or circumstantial factors, and will be examined in the following section. In effect, the propositions contained with this level suggest the bi-directionality of emotion contagion in organizations, and concurs with Hareli and Rafaeli's (2008) proposition that emotion flows can transcend formal organizational hierarchies and boundaries. Further work, however, needs to be done within this area, before more specific claims can be made detailing how emotional contagion processes shape leadership outcomes. Given existing research, however, it can be proposed that:

**Proposition 3c.** Implicit and explicit emotional contagion processes from followers to leaders influence a wide-range of team and leadership outcomes, and is particularly relevant in understanding the role of followership in the leadership process.

### Level 4: groups and teams: the formation and expression of collective emotion

#### The formation of group-level affect

Emotional contagion processes at the level of groups and teams are mostly apparent in the sharing and transfer of emotions between multiple individuals, resulting in the enactment of group-level affect. Research at this level highlights how emotional contagion processes influence the sharing and experience of emotions among group members, and between groups of individuals. Numerous studies show how emotional contagion processes give rise to group-level affect. Barsade (2002) terms the spread of emotions in groups as a 'ripple effect', and showed that emotional contagion processes impact overall team cooperation and conflict tendencies. Automatic and subconscious mimicry of group members' facial expressions were also shown to result in a sharing of emotional states in a series of studies by Totterdell, Kellett, Teuchmann, and Briner (1998) and Totterdell (2000), and in Anderson, Keltner, and John's (2003) longitudinal study. These studies propose that recurring emotional contagion processes led to convergence of emotions between multiple individuals. Indeed, Bartel and Saavedra (2000) suggest that such group-level affect is a construction of multiple team members' emotion cues. Likewise, Kelly and Barsade (2001) and Barsade and Gibson (1998) both claim that in collective contexts, group-level affect is a function of individual team member mood, emotions and sentiments. The sharing and unification of such emotions at a group serves to facilitate coordination of group-level behaviors. Torrente, Salanova, and Llorens (2013) showed that contagion of positive emotions was associated with team work engagement. The authors suggest that the sharing of such positive emotions between team members leads the team as a whole to feel fully absorbed towards the task at hand, elevating feelings of pride and joy towards their work. Evidence for group-level emotion being qualitatively different individual-level emotion, and influencing individual-level behavior can be seen in studies by Smith, Seger, and Mackie (2007). These authors show that group-level emotion is socially shared between members of that group, influences attitudes and behaviors towards one's own group and the out-group, and is strongly associated with identification. Adherence to shared group-level emotion at this level is thus strongly moderated by the extent of follower identification with their group (Seger, Smith, & Mackie, 2009). That is, how susceptible followers are towards being affected by the emotions of their fellow group members is dependent on how much they identify with their group. Ilies et al. (2007) showed that susceptibility to emotional contagion and collectivistic tendencies also influence the level to which individuals share emotions with fellow group members. Collectively, these studies suggest that the formation of group-level emotion by emotional contagion processes is based primarily on implicit processes inherent in any group or team interaction. Not all of the studies, however, show that the spread of emotions between group members leads to positive outcomes. Bakker, Schaufeli, Sixma, and Bosveld (2001) show how emotional contagion processes are responsible for collective burnout among medical practitioners. In another study, Fast and Tiedens (2010) show that contagion processes were partly responsible for the spreading of blame within group settings. The communication of negative attitudes and emotions via emotional contagion was found to impact job behaviors and work attitudes. In view of these studies, it can be proposed that:

**Proposition 4a.** The enactment of group-level affect can be attributed to implicit emotional contagion processes. This leads to shared emotions between group members that subsequently influences group member interactions and performance.

#### Collective emotions as part of group identity

Group-level emotion serves two important functions – (1) to maintain group identity and solidarity in the event of challenging circumstances, and (2) to motivate collective emotion towards influences perceived by group members as threats to their group's identity. Evidence for the first function of group self-preservation can be seen in Páez, Basabe, Ubillos, and González-Castro's (2007) study showing how emotional contagion processes contributed towards the sharing of emotions following the traumatic events of the March 11th terrorist bombings in Madrid. Conejero and Etxebarria's (2007) study of the same event showed that shared emotions were also a significant predictor of individual intentions to engage in altruistic behaviors towards others within the group. Rimé (2007) highlights that the exchange of emotions during such situations also leads to emotional communion – a collective understanding and shared empathic interactions that provides collective support to group members during demanding situations. The sharing of such emotions within a group setting can also motivate collective action (Drury & Reicher, 2005, 2009; Ellemers, Spears, & Doosje, 2002; Iyer & Leach, 2008). Research in this area illustrates that in the interest of preserving group identity, group members may collectively feel and subsequently express negative emotions towards individuals or groups perceived as threats to

the group (Becker, Tausch, & Wagner, 2011). Similarly, Thomas, McGarty, and Mavor (2009) suggest that the interaction of a unified identity and collectively-shared emotions creates a climate of empowerment, which may translate to collective action. Thus, group identity, along with the sharing of emotions through emotional contagion processes, are both key mechanisms in motivating collective action. More broadly, these findings also suggest that emotions are an integral part of group identity, and is a symbolic aspect of group identity shaped by leaders through expressions of desired, group-relevant emotions (Pescosolido, 2002; Thomas, Martin, & Riggio, 2013; van Knippenberg, 2011). In line with this argument, Sanchez-Burks and Huy (2009) propose that recognizing and managing a wide range of different emotions within groups is an essential leadership skill under turbulent organizational circumstances. These authors term this skill 'emotional aperture', and propose that beyond managing individual-level emotions, leaders should also develop capacities in managing group-level affect. To date, empirical evidence regarding the importance of this particular skill is limited, but holds promise in further understanding how leaders are influenced by, and in turn, influence, the collective emotions of the groups in which they are embedded with. The review of the research above leads to the proposition that:

**Proposition 4b.** Group-level affect enhances solidarity between group members, shapes group identity and motivates collective action. Collective action is motivated by explicit expressions of emotion towards threats or out-group members, and is a function of leaders and followers shaping this symbolic aspect of the group through explicit emotional contagion processes.

Further consideration of the influence dynamics at this level, however, has to be given to the contextual and circumstantial factors that also dictate the amount of influence leaders have on their groups, and how strongly groups of followers drive collective action. Factors such as team interdependence, team stability, power and status differences within the team, and group culture can all moderate the extent, and intensity of both implicit and explicit emotional contagion processes. A highly interdependent team, for instance, may allow for both leaders and followers to influence each other's emotions to a greater extent than teams that function in a more autonomous manner. Teams that adopt more autonomous structures, characterized by limited leader-follower interactions or are separated by geographical distance (i.e. virtual teams) may be characterized by lower leader-follower trust, and therefore, fewer opportunities for sharing of emotion to occur (Staples & Webster, 2008; Yang & Mossholder, 2004).

Situations of crises have also been shown to increase follower susceptibility to leader influence – followers' need for solidarity during times of group instability has been shown to increase group susceptibility to leadership influence appeals (Goleman, Boyatzis, & McKee, 2013; Padilla, Hogan, & Kaiser, 2007). Such situations of ambiguity often elevate followers need for a group identity, and thus, cause them to be more susceptible to the emotions expressed by leaders in order to lower the experience of situational ambiguity (van Knippenberg & Hogg, 2003). A crisis situation, in particular, has been shown to be influential in shaping group perceptions of charismatic leaders (Pillai & Meindl, 1998). Emotional contagion from leaders to followers during crisis situations has also been shown to influence followers' judgments of leader intentions during situations of crisis (Madera & Smith, 2009). Differences in power distributions between leaders and followers within teams is another potential moderator determining how much leaders and followers can influence each other's' emotions. Such differences may cause leaders to be more susceptible to the emotional influence attempts of followers than vice-versa. Finally, cultural factors – either national or organizational, trickling down from the fifth level of analysis (organizational level) may also influence more authoritarian, or egalitarian distribution of power within groups (Fischer & Manstead, 2008). At the group level, additional environmental and situational factors come into play, requiring leaders to acknowledge the factors that may encourage, or hinder their attempts at implicitly and explicitly influencing the emotions of groups. Followers, conversely, may be allowed greater, or lesser opportunities to influence leaders in turn, given these contextual factors.

**Proposition 4c.** At the group level of analysis, situational, contextual and group-relevant factors moderate the extent to which leaders and followers influence one another through implicit and explicit emotional contagion processes.

The role of emotional contagion processes at Level 4 - the group level, is apparent in the formation of group identity and in directing collective efforts towards desired team and organizational outcomes. The research reviewed and propositions presented pertaining to the roles of both implicit and explicit emotional contagion routes is consistent with Rhee's (2007) observation that at the group-level, emotions can be either a stable property of the group (i.e. team affective climate), or transitory, collective emotion that arise as a result of certain events or demands of the group. The majority of the research contained within this level, however, conceptualizes emotional contagion processes as being largely implicit, automatic processes which unify collective action. The review of research within this level also shows that coordinated group behaviors (such as collective action) are only possible when group identities are aligned with group-level emotions. Emotional convergence and communion therefore appear to be outcomes of implicit emotional contagion processes within multiple group members and between leaders and their followers. Less evident at this level of research, however, are the explicit processes initiated by leaders and followers in the formation, maintenance and expression of group identity through emotions. This emotional exchange between leaders and followers are crucial elements in influencing the strength of shared identity and intentions to engage in collective action, and should be examined in detail for further research.

*Level 5: organizational culture and climate: the spread of emotion across social networks*

A review of research examining emotional contagion processes at this level is comparatively scarce, in relation to those in previous levels. This is mainly because emotional contagion processes have predominantly been examined within interpersonal and individual levels, given its conceptualization as a process that impacts minute, individual-level changes in affect. However, studies employing new research methods have provided evidence for the spread of emotion across large networks, suggesting that individual-level

emotional contagion processes can shape group-level culture and climate over an extended period of time. In longitudinal studies of large social networks, researchers have shown that the spread of emotions are likened to infectious diseases, influencing the experience of affect of large numbers of individuals. Fowler and Christakis (2008) tracked a large sample of individuals over 20 years and showed that the spread of happiness occurs over a wide range of social ties. Using the same database of respondents, Hill, Rand, Nowak, and Christakis (2010) suggested that the formation of such long-term emotional states is possibly attributed to emotional contagion processes.

Given the results of these studies, it is plausible to suggest that repeated instances of individual-level and group-level sharing of emotions via emotional contagion processes, over a period of time, eventually gives rise to macro-level, shared affect that permeates an organization's entire social network. This proposition has been implied in conceptual models by Hareli and Rafaeli (2008), which they refer to as 'emotion spirals', and in Dasborough et al. (2009) multi-level model in which individual-level negative emotional contagion can eventually influence organization affective and trust climate. Empirical evidence for the spread and sharing of affective states within an organization is also evident in Totterdell, Wall, Holman, Diamond, and Epitropaki (2004) social network analysis study. In this study, the authors suggest that both implicit and explicit emotional contagion processes lead to affective sharing and converge of affect in organizations. Ashkanasy and Nicholson's (2003) work on the climate of fear, and recently, Kilmann, O'Hara, and Strauss (2009) work on a climate of courage also suggest that the sharing and spread of emotions, which lead to the enactment of organizational-level climate, are facilitated by emotional contagion processes. Important in explaining the formation of this organization-wide emotion is that the sharing of such emotions forms part of an organization's narrative, and that the spread of these emotions are continuously experienced even without direct experience of specific emotion-triggering events. Extending on research in services settings, emotional contagion processes are also implicated in the formation of organization-wide service climates. This particular instance of climate refers to 'employees' consensual beliefs about the organization's emphasis on service quality throughout the service production, deliver, and consumption process' (Hong, Liao, Hu, & Jiang, 2013). Research on service climate goes beyond just the sharing and communication of affect between service providers and clients. Instead, researchers adopt the term 'psychological contagion' to explain that both in addition to emotional contagion, organizational climate is also enacted though social comparison, modeling and regulation of affect across the entire organizational environment (Salanova, Agut, & Pieró, 2005). Research on justice climate, likewise, highlights that organizational climate is a function of mutually-influencing individual and group-level factors and has implications on individual-level employee outcomes. Spell and Arnold (2007) showed that individual-level perceptions of organizational distributive justice shaped their perceptions of a justice climate and individual reports of anxiety and depression. In another multi-level study, Liao and Rupp (2005) showed that individual-level perceptions of justice influenced employee job satisfaction, commitment, and citizenship behaviors. The authors suggest that shared affect at the group level may constitute organization-wide climate, shaping organization-wide sentiments and emotions that then 'trickle down' and influence individual-level affect and work behaviors. Based on available evidence and research at this level of analysis, it can be proposed that:

**Proposition 5a.** Implicit and explicit emotional contagion processes underlie the spread of emotion over wide social networks. The communication and sharing of emotion across multiple levels in organizations, shapes, and in turn, is shaped by, organizational culture and climate.

The spread of emotion across multiple social networks through emotional contagion processes suggests that leaders and followers' mutual influence attempts – through implicit and explicit emotional contagion routes, shapes organization-wide culture and climate. A review of the literature, however, only provides cursory explanations for the mechanisms employed by leaders and followers to influence organizational culture and climate. For leaders at least, there is some empirical evidence that the management of emotional displays is one way to influence organizational-wide change. Thus, one might infer from the review of research covered in the discussion of emotional contagion processes at Level 4 (the between groups level) that leaders shape organizational culture by influencing multiple followers, and groups of followers' emotions. Suggestions for the importance of leaders in influencing organization-wide characteristics such as culture, is noted by Huy (1999), who proposed that leaders need to be skilled in managing the emotional dynamics of their organizations, particularly when the organization is undergoing radical change. In his model, Huy (1999) highlights the need for leaders to manage three meso-level emotion-attending behaviors: receptivity, mobilization and learning. These behaviors require the leaders to manage the flux of emotions that accompany radical change experiences, shaping, molding and ultimately, influencing the emotional processes characteristic of this form of change. Leaders thus play an active role, through managed, explicit emotional expressions, in shaping new organizational cultures, while simultaneously also regulating the subtle implicit emotional undertones of their organization's culture. Evidence for the importance of the leader emotional expressions in affecting organizational-wide behaviors is also noted by Walter and Bruch (2010) who found that transformational leadership processes can influence an organization's productive organizational energy through emotional contagion processes. These trickle-down effects of leader emotion and enactment of a transformational leadership climate has also recently been shown to have an impact on firm performance (Böhm, Dwertmann, Bruch, & Shamir, 2015). The collective, meso-level, organization-wide outcomes are thus also reliant on leaders' active influence attempts at managing emotions at the organizational-level. Further research is necessary to examine how followers themselves take an active role in influencing organization-wide affect and culture. From the existing evidence, it can be suggested that:

**Proposition 5b.** The management of organization-wide culture relies partly on leaders' management of organization-level emotions through implicit and explicit emotional contagion processes. Leaders' management and regulation of emotional contagion processes underlies the shape, form, and outcome of organization-wide culture, climate and change outcomes.

## Discussion

*General discussion*

In this paper, I reviewed studies examining the role of emotional contagion as the emotional link, implicated in the conveyance of emotions and formation of collective emotions across multiple organizational levels. I illustrate how emotional contagion processes are apparent in the transfer of emotions between leaders and followers in organizations, and how these processes shape group and organizational-level outcomes. At the first level (intrapersonal level) I distinguish between implicit and explicit emotional contagion processes. A review of recent neuropsychological research indicates that the mechanisms underlying emotional contagion processes consist of two overlapping mechanism. First, a largely automatic process based on motor mimicry and second, a more cognitive route that involves perspective-taking in order to regulate the extent to which one mentalizes another's emotional state. These processes are moderated by individual-level differences at the second level – the between persons level. Individual susceptibility to emotional contagion and trait affectivity moderate the extent to which individuals are affected by the emotions of others. I also reviewed the associations between personality and leadership style, suggesting that these between-persons differences also influence leader emotional expressivity, which influences the extent to which leaders rely on explicit emotional contagion as a basis for their mode of influence. It is at the third level – the interpersonal level, that extant research highlights most evidently the impact of emotional contagion process in influencing leadership outcomes. Most notably in research on emotional labor and in leader-follower interactions, studies at this level show that both implicit and explicit emotional contagion processes shape organizational outcomes. In the case of emotional labor, explicit emotional contagion processes serve as a key mechanism underlying the transfer of emotion from service provider to clients, and constitutes an important component of the service experience. In studies of leadership interactions, both implicit and explicit emotional contagion processes were shown to influence team and leadership outcomes. Explicit displays of emotion from leaders to followers are also crucial in understanding the process by which charismatic leaders motivate followers. The fourth level of the model pertains to group-level processes, and at this level, emotional contagion processes facilitate the enactment of collective, group-level emotion. Research in this area shows that collective, shared emotion shaped by implicit emotional contagion processes, helps provide a sense of solidarity, forms an important part of group identity, and motivates collective action tendencies. Leaders at this level may take on a more symbolic role, through explicit expressions of group-relevant emotions that builds emotional communion and collective identity. At the fifth and final level, there is some evidence for the role of emotional contagion processes in the creation of organization-wide climate and culture. Research in this area remains limited, but the spread of
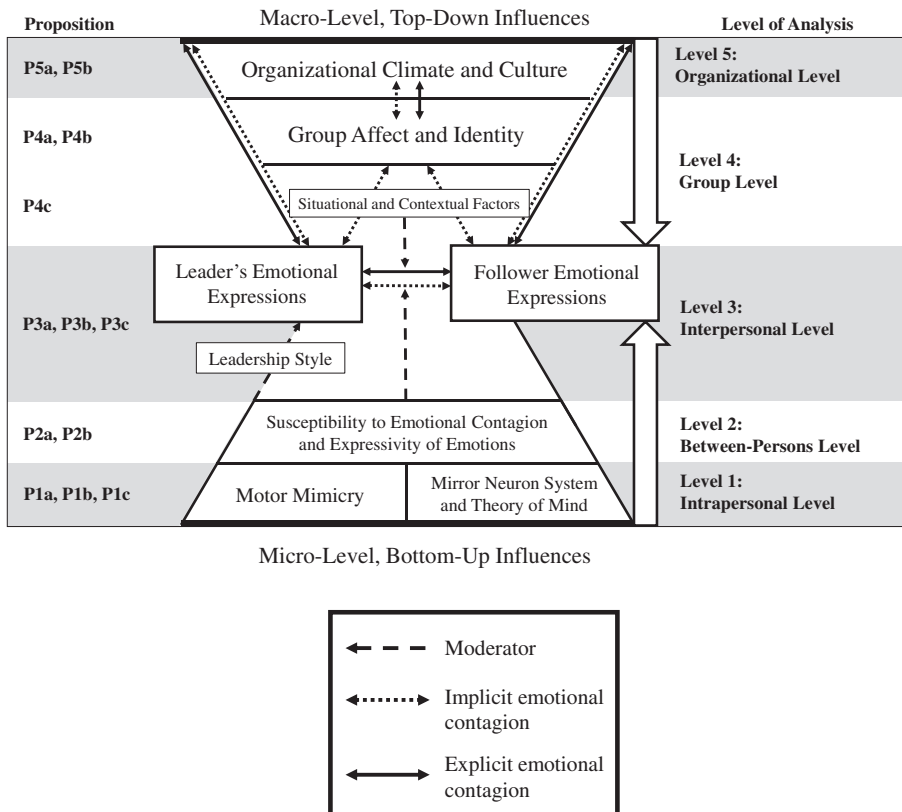


Fig. 1. Theoretical model.

emotions over a wide range of individuals has been shown to shape macro-level organizational climate and culture. Studies at this level show that emotion can spread widely across multiple teams and individuals within an organization, constituting a top-down influence on organizational members' affect. A summary of how emotional contagion processes serves as the emotional link across these five levels of analysis is show in Fig. 1.

*Main themes and directions for further research*

The present review reveals several pertinent themes relevant to further research on the role emotional contagion processes in organizational leadership. These themes are reviewed, and suggestions for further research – along with their implications for organizational leadership across the five levels of analysis, are discussed in the following section.

*Distinguishing between implicit and explicit emotional contagion processes.* Further research should distinguish between whether implicit or explicit emotional contagion processes are primarily operative for the outcomes examined. In studies of emotional labor, for instance, it is apparent that such processes are mainly explicit, involving the conscious regulation of emotional expressions in order to achieve service encounter outcomes. This distinction, however, is less apparent in studies focusing on leader-follower interactions. It is of course, plausible to state that the emotional contagion processes in leader-follower interactions follow both implicit and explicit routes. Identifying the routes to emotional influence employed by leaders may also refine theorizing work done on the role of emotional labor in leadership (Gardner et al., 2009; Humphrey et al., 2008). Considering this important distinction opens up avenues for further scholarly inquiry, including an examination of the strategies employed by leaders to actively and deliberately influence follower affect and behaviors. Deliberate enactment of collective, group-level negative mood, for instance, may be a means by which leaders foster more deliberate decision-making in followers. van Kleef et al. (2009) showed how leader displays of anger and happiness influences team performance, suggesting emotional contagion processes as part of an 'affective reactions pathway' to leadership influence. Subsequent research can also examine the role of explicit emotional contagion of discrete emotions (as opposed to the general broad dichotomy of positive and negative affect) and how they influence specific team outcomes. Given the suggested reciprocity of emotions between leaders and followers as well, it may also be worthwhile considering how followers themselves may use explicit emotional contagion processes to influence leadership outcomes.

*Impact of emotional contagion of discrete emotions on specific leadership outcomes.* It may also be prudent for further studies to link the contagion of specific discrete emotions with specific leadership and specific team behaviors. Much of the research reviewed appears to focus on how emotional contagion processes influences follower mood, and perceptions – particularly perceptions of leader charisma and transformational leadership. As such, further studies could pay closer attention to how emotional contagion processes impact specific – and desired, team outcomes. Sy et al. (2005), for instance, suggests that leader expressions of unpleasant mood resulted in followers exerting greater effort towards a task, whereas in Visser et al. (2013) study, leader expressions of sadness prompted followers to be more analytical. Visser et al. (2013) study highlights that the outcomes of contagion processes differ according to which discrete emotion is being conveyed from leaders to followers, and suggests that specific, desired team outcomes and followers behaviors can be managed by the leader's deliberate expressions of specific discrete emotion. In effect, further research can 'map' the regulated expressions of discrete emotions with specific team and follower outcomes, providing practical implications for leaders on the management of team processes through emotional contagion processes.

*Cross-level interactions: bottom-up and top-down approaches to understanding emotional contagion processes.* Conceptualizing organizational processes across multiple levels may be especially important in advancing understanding of how emotional contagion processes shape, and are shaped by, both micro-level and macro-level factors. Processes that occur at the lower levels (intrapersonal and between-persons levels) tend to be largely bottom-up in nature, whereas emotional contagion processes occurring at the higher levels (groups and culture) are largely top-down influences on individual affect. While most studies have distinguished between the top-down and bottom-up influences, fewer studies have examined the cross-level interactions between these two routes. For instance, bottom-up influences such as personality and trait affectivity and leadership style may influence a leader's ability to effectively enact group-level emotion. Conversely, top-down influences such as culture would seem likely to moderate the extent to which emotional contagion processes at the lower levels are likely to occur. Dasborough et al. (2009), for instance, propose that power distance may influence expectations of power distribution in organizations, moderating the extent to which followers are susceptible to their leader's emotions. How teams are organized, and how much its members identify with their groups may moderate the extent and impact of emotional contagion processes. Given the largely universal nature of processes that give rise to emotional contagion (i.e. motor mimicry and neurological processes), however, it can be argued that top-down, cross-level interactions are more likely than bottom-up, cross-level interactions. Further research on cross-level interactions would nonetheless provide further evidence for the reciprocity of emotion flows and emotional linkages in organizations.

*Situational and contextual influences on emotional contagion processes.* Further research would also benefit from understanding the contextual and situational factors influence of the sharing of emotions between organizational members. Owing to the largely tacit nature of emotional contagion processes, a good proportion of research draw conclusions from laboratory experiment settings, separated from the actual organizational environment on which its findings are purportedly reflective of. Liden and Antonakis (2009) noted that contextual factors have been largely neglected as an influence on leadership outcomes. Gooty, Gavin, and Ashkanasy (2009) concur, stating that future field studies of emotions in organizations must acknowledge and account for the context and environment in which those emotion processes occur. Therefore, susceptibility to emotional contagion may also be due to contextual

influences (such as team and national-level contexts) and not on individual-level leader or follower attributes. Further research could thus extend on this line of research and examine specifically how susceptibility to, and outcomes of the contagion effect, are moderated by organizational events and situational influences.

*The role of technology: emotional contagion via computer-mediated communication.* Recent research suggests that the spread of emotion can occur outside of face-to-face, interpersonal interactions. Belkin (2009) theorizes that emotional contagion processes can also take place in online interactions and electronic forms of communication such as email, and that this would also impact team members affect and work outcomes. Hancock, Gee, Ciaccio, and Link (2008) provide some evidence for this possibility, showing in their laboratory study that emotional contagion can occur very quickly via text-based communication. Results from this study further indicated that the transfer of emotion occurs rather implicitly; no intention is required on part of the interacting individuals for emotional contagion to occur within an online setting. Consistent with these findings, Cheshin, Rafaeli, and Bos (2011) show that emotional contagion may also occur in an online team setting, and that the content of such textual information leads to interpretations of the message as either conveying anger or happiness. Existing research predominantly conceptualizes leadership interactions occurring via face-to-face contexts. Some studies, however, have recently suggested that the emotional dynamics of leader-follower interactions over a virtual setting differ from that of direct interpersonal interactions, and that the nature of leadership within these contexts should be examined in greater detail (Johnson, Bettenhausen, & Gibbons, 2009; Purvanova & Bono, 2009). Given the prevalence of computer-mediated, textual forms of communication in today's organizations (de Cremer, 2006), further research could examine in greater detail the nature of emotional contagion processes as communicated via such technology-mediated channels, and how this influences leadership outcomes.

### Directions for methodological advancement

Emotional contagion processes are mostly transitory processes and are usually examined in controlled laboratory experiment settings. Capturing changes in mood in naturalistic settings, however, is possible given recent methodological advancements. The use of experience sampling methods in recent studies of leadership allows for measurement of transient emotion states (see Bono, Foldes, Vinson, & Muros, 2007; Nielsen & Cliel, 2011). The assessment of group-wide and organization-wide emotions is also possible through methodological and statistical advances that employ large samples. Totterdell et al. (2004) study provides possible suggestions for the measurement of affect at the group and organizational level, and to advance knowledge of the affective components that exist at these levels of analyses. The use of physiological measures also holds great potential for leadership research. Given the underlying neurological bases for emotional contagion processes, examining influence processes from a neurological perspective will serve to advance the state of the science of leadership as a whole (Lee, Senior, & Butler, 2012; Waldman, Balthazard, & Peterson, 2011). In one study, researchers used EEG to measure differential brain pattern activities, concluding that there are notable differences between leaders who are transformational from those who are not transformational (Balthazard, Waldman, Thatcher, & Hannah, 2012). Such initial findings are promising, and beneficial in capturing affective mechanisms in leadership, as well as objectively understanding the bottom-up processes that give rise to affect-based influence processes. They further consolidate the argument that at its foundations, leadership influence relies heavily on affective processes - processes that are better understood under the light of neurological science.

## Conclusion

In this paper, I reviewed research suggesting that both implicit and explicit emotional contagion processes shape, and also are shaped by processes from the individual to the organization levels of analysis. At the within- and between-persons levels of analysis, emotional contagion processes tend to be largely implicit, consistent with conceptualizations of emotional contagion being a process as a process is largely tacit and subconscious in nature. At the interpersonal, group and organization levels of analysis, however, it becomes apparent that such processes can be actively managed, based on the explicit emotional contagion processes expressed between leaders and followers. As shown in this review, however, both implicit and explicit emotional contagion processes are crucial in understanding the emotional links between multiple levels of an organization, and has implications for how leaders manage these emotional links within an organization.

## References

Adelmann, P. K., & Zajonc, R. B. (1989). Facial efference and the experience of emotion. *Annual Review of Psychology*, *40*, 249–280.
Anderson, C., Keltner, D., & John, O. P. (2003). Emotional convergence between people over time. *Journal of Personality and Social Psychology*, *84*, 1054–1068.
Andréasson, P., & Dimberg, U. (2008). Emotional empathy and facial feedback. *Journal of Nonverbal Behavior*, *32*, 215–224.
Arizmendi, T. G. (2011). Linking mechanisms: Emotional contagion, empathy, and imagery. *Psychoanalytic Psychology*, *28*, 405–419.
Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, *18*, 88–115.
Ashkanasy, N. M. (2003). Emotions in organizations: A multi-level perspective. *Research in multi level issues*, *2*, 9–54.
Ashkanasy, N. M. (2013). Neuroscience and leadership: Take care not to throw the baby out with the bathwater. *Journal of Management Inquiry*, *22*, 311–313.
Ashkanasy, N. M., & Ashton-James, C. E. (2007). Positive emotion in organizations: A multi-level framework. In D. Nelson, & C. L. Cooper (Eds.), *Positive organizational behavior: Accentuating the positive at work* (pp. 57–73). London: Sage.
Ashkanasy, N. M., & Humphrey, R. H. (2011). A multi-level view of leadership and emotions: Leading with emotional labor. *Sage handbook of leadership*, 363–377.
Ashkanasy, N. M., & Nicholson, G. J. (2003). Climate of fear in organizational settings: Construct definition, measurement and test of theory. *Australian Journal of Psychology*, *55*, 24–49.
Avoilio, B., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, *16*, 315–338.

Awamleh, R., & Gardner, W. L. (1999). Perceptions of leader charisma and effectiveness: The effects of vision content, delivery, and organizational performance. *The Leadership Quarterly, 10*, 345–373.

Bakker, A. B., Schaufeli, W. R., Sixma, H. J., & Bosveld, W. (2001). Burnout contagion among general practitioners. *Journal of Social and Clinical Psychology, 20*, 82–98.

Balthazard, P. A., Waldman, D. A., Thatcher, R. W., & Hannah, S. T. (2012). Differentiating transformational and non-transformational leaders on the basis of neurological imaging. *The Leadership Quarterly, 23*, 244–258.

Barger, P. B., & Grandey, A. A. (2006). Service with a smile and encounter satisfaction: Emotional contagion and appraisal mechanisms. *Academy of Management Journal, 49*, 1229–1238.

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

Barsade, S. G., & Gibson, D. E. (1998). Group emotion: A view from top and bottom. *Research on Managing Groups and Teams, 1*, 81–102.

Bartel, C. A., & Saavedra, R. (2000). The collective construction of work group moods. *Administrative Science Quarterly, 45*, 197–231.

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

Bass, B. M., Avolio, B. J., & Atwater, L. (1996). The Transformational and Transactional Leadership of Men and Women. *Applied Psychology: An International Review, 45*, 5–34.

Becker, J. C., Tausch, N., & Wagner, U. (2011). Emotional consequences of collective action participation: Differentiating self-directed and out-group directed emotions. *Personality and Social Psychology Bulletin, 37*, 1587–1598.

Belkin, L. Y. (2009). Emotional contagion in the electronic communication context: Conceptualizing the dynamics and implications of electronic emotional encounters in organizations. *Journal of Organizational Culture, Communications, and Conflict, 13*, 105–122.

Blairy, S., Herrera, P., & Hess, U. (1999). Mimicry and the judgment of emotional facial expressions. *Journal of Nonverbal Behavior, 23*, 5–41.

Bligh, M. C. (2011). Followership and follower-centred approaches. In A. Bryman, D. Collinson, K. Grint, B. Jackson, & M. Uhl-Bien (Eds.), *The Sage handbook of leadership* (pp. 393–403). Los Angeles: Sage.

Böhm, S. A., Dwertmann, D. J., Bruch, H., & Shamir, B. (2015). The missing link? Investigating organizational identity strength and transformational leadership climate as mechanisms that connect CEO charisma with firm performance. *The Leadership Quarterly, 26*(2015), 156–171.

Bolger, N., & Schilling, E. A. (1991). Personality and the problems of everyday life: The role of neuroticism in exposure and reactivity to daily stressors. *Journal of Personality, 59*, 355–386.

Bono, J. E., Foldes, H. J., Vinson, G., & Muros, J. P. (2007). Workplace emotions: The role of supervision and leadership. *Journal of Applied Psychology, 92*, 1357–1367.

Bono, J. E., & Ilies, R. (2006). Charisma, positive emotions and mood contagion. *The Leadership Quarterly, 17*, 317–334.

Bono, J. E., & Judge, T. A. (2004). Personality and transformational and transactional leadership: A meta-analysis. *Journal of Applied Psychology, 89*, 901–910.

Boyatzis, R. E., & McKee, A. (2013). *Resonant leadership: Renewing yourself and connecting with others through mindfulness, hope and compassion.* Boston: Harvard Business Press.

Boyatzis, R. E., Smith, M. L., & Blaize, N. (2006). Developing sustainable leaders through coaching and compassion. *Academy of Management Learning and Education, 5*, 8–24.

Canli, T., Zhao, Z., Desmond, J. E., Kang, E., Gross, J., & Gabrieli, J. D. E. (2001). An fMRI study of personality influences on brain reactivity to emotional stimuli. *Behavioral Neuroscience, 115*, 33–42.

Cardon, M. S. (2008). Is passion contagious? The transference of entrepreneurial passion to employees. *Human Resource Management Review, 18*, 77–86.

Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review, 34*, 511–532.

Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology, 76*, 893–910.

Cheng, Y., Yen, C., & Chen, L. H. (2012). Transformational leadership and job involvement: The moderation of emotional contagion. *Military Psychology, 24*, 382–396.

Cherulnik, P. D., Donley, K. A., Wiewel, T. S. R., & Miller, S. R. (2001). Charisma is contagious: The effects of leaders' charisma on observers' affect. *Journal of Applied Social Psychology, 31*, 2149–2159.

Cheshin, A., Rafaeli, A., & Bos, N. (2011). Anger and happiness in virtual teams: Emotional influences of text and behavior on others' affect in the absence of non-verbal cues. *Organizational Behavior and Human Decision Processes, 116*, 2–16.

Chi, N., Chung, Y., & Tsai, W. (2011a). How do happy leaders enhance team success? The mediating roles of transformational leadership, group affective tone, and team processes. *Journal of Applied Social Psychology, 41*, 1421–1454.

Chi, N., Grandey, A. A., Diamond, J. A., & Krimmel, K. R. (2011b). Want a tip? Service performance as a function of emotion regulation and extraversion. *Journal of Applied Psychology, 96*, 1337–1346.

Conejero, S., & Etxebarria, I. (2007). The impact of the Madrid bombing on personal emotions, emotional atmosphere and emotional climate. *Journal of Social Issues, 63*, 273–287.

Conger, J. A., & Kanungo, R. N. (1998). *Charismatic leadership in organisations.* California: Sage.

Crant, J. M., & Bateman, T. S. (2000). Charismatic leadership viewed from above: The impact of proactive personality. *Journal of Organizational Behavior, 21*, 63–75.

Cross, K. A., & Iacoboni, M. (2014). To imitate or not: Avoiding imitation involves preparatory inhibition of motor resonance. *NeuroImage, 91*, 228–236.

Cross, K. A., Torrisi, S., Reynolds Losin, E. A., & Iacoboni, M. (2013). Controlling automatic imitative tendencies: Interactions between mirror neuron and cognitive control system. *NeuroImage, 83*, 493–504.

Dasborough, M. T., Ashkanasy, N. M., Tee, E. Y. J., & Tse, H. H. M. (2009). What goes around comes around: How meso-level negative emotional contagion can ultimately determine organisational attitudes toward leaders. *The Leadership Quarterly, 20*, 571–585.

Davis, K. L., & Panksepp, J. (2011). The brain's emotional foundations of human personality and the affective neuroscience personality scales. *Neuroscience & Biobehavioral Reviews, 35*, 1946–1958.

de Cremer, D. (2006). Affective and motivational consequences of leader self-sacrifice: The moderating effect of autocratic leadership. *The Leadership Quarterly, 17*, 79–93.

De Vignemont, F., & Singer, T. (2006). The empathic brain: How, when and why? *TRENDS in Cognitive Sciences, 10*, 435–441.

de Waal, F. B. M. (2008). Putting the altruism back into altruism: The evolution of empathy. *Annual Review of Psychology, 59*, 279–300.

Decety, J. (2011). The neuroevolution of empathy. *Annals of the New York Academy of Sciences, 1231*, 35–45.

Decety, J., & Jackson, P. L. (2006). A social-neuroscience perspective on empathy. *Current Directions in Psychological Science, 15*, 54–58.

Decety, J., & Lamm, C. (2006). Human empathy through the lens of social neuroscience. *The Scientific World Journal, 6*, 1146–1163.

DePaolo, B. M., Rosenthal, R., Eisenstat, R. A., Rogers, P. L., & Finkelstein, S. (1978). Decoding discrepant nonverbal cues. *Journal of Personality and Social Psychology, 36*, 313–323.

DeYoung, C. G., Hirsh, J. B., Shane, M. S., Papademetris, X., Rajeevan, N., & Gray, J. R. (2010). Testing predictions from personality neuroscience: Brain structure and the Big Five. *Psychological Science, 21*, 820–828.

Dimberg, U. (1982). Facial reactions to facial expressions. *Psychophysiology, 19*, 643–647.

Dimberg, U., Andréasson, P., & Thunberg, M. (2011). Emotional empathy and facial reactions to facial expressions. *Journal of Psychophysiology, 25*, 26–31.

Doherty, R. W. (1997). The emotional contagion scale: A measure of individual differences. *Journal of Nonverbal Behavior, 21*, 131–154.

Doherty, R. W., Orimoto, L., Singelis, T. M., Hatfield, E., & Hebb, J. (1995). Emotional contagion: Gender and occupational differences. *Psychology of Women Quarterly, 19*, 355–371.

Drury, J., & Reicher, S. (2005). Explaining enduring empowerment: A comparative study of collective action and psychological outcomes. *European Journal of Social Psychology, 35*, 35–58.

Drury, J., & Reicher, S. (2009). Collective psychological empowerment as a model of social change: Researching crowds and power. *Journal of Social Issues, 65*, 707–725.

Eagly, A. H., Johannesen-Schmidt, M. C., & Van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: a meta-analysis comparing women and men. *Psychological Bulletin, 129*, 569–591.

Eberly, M. B., & Fong, C. T. (2013). Leading via the heart and mind: The roles of leader and follower emotions, attributions and interdependence. *The Leadership Quarterly, 24*, 696–711.

Eid, M., & Diener, E. (1999). Intraindividual variability in affect: Reliability, validity, and personality correlates. *Journal of Personality and Social Psychology, 76*, 662–676.

Ellemers, N., Spears, R., & Doosje, B. (2002). Self and social identity. *Annual Review of Psychology, 53*, 161–186.

Erez, A., Misangyi, V. F., Johnson, D. E., LePine, M. A., & Halverson, K. C. (2008). Stirring the hearts of followers: Charismatic leadership as the transferal of affect. *Journal of Applied Psychology, 93*, 602–615.

Fast, N. J., & Tiedens, L. Z. (2010). Blame contagion: The automatic transmission of self-serving attributions. *Journal of Experimental Social Psychology, 46*, 97–106.

Feldman Barrett, L., Robin, L., Pietromonaco, P. R., & Eyssell, K. M. (1998). Are women the "more emotional" sex? Evidence from emotional experiences in social context. *Cognition and Emotion, 12*, 555–578.

Fischer, A. H., & Manstead, A. S. (2008). Social functions of emotion. *Handbook of emotions, 3*, 456–468.

Fowler, J. H., & Christakis, N. A. (2008). Dynamic spread of happiness over a large social network: Longitudinal analysis over 20 years of the Framingham Heart Study. *British Medical Journal, 337*, 1–9.

Gardner, W. L., Fischer, D., & Hunt, J. G. J. (2009). Emotional labor and leadership: A threat to authenticity? *The Leadership Quarterly, 20*, 466–482.

Goleman, D., Boyatzis, R., & McKee, A. (2013). *Primal leadership: Unleashing the power of emotional intelligence.* Harvard Business Press.

Gooty, J., Connelly, S., Griffith, J., & Gupta, A. (2010). Leadership, affect and emotions: A state of the science review. *The Leadership Quarterly, 21*, 979–1004.

Gooty, J., Gavin, M., & Ashkanasy, N. M. (2009). Emotion research in OB: The challenges that lie ahead. *Journal of Organizational Behavior, 30*, 833–838.

Gosserand, R. H., & Diefendorff, J. M. (2005). Emotional display rules and emotional labor: The moderating role of commitment. *Journal of Applied Psychology, 90*, 1256–1264.

Grandey, A. A. (2003). When "the show must go on": Surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of Management Journal, 46*, 86–96.

Grandey, A. A., Fisk, G. M., Mattila, A. S., Jansen, K. J., & Sideman, L. A. (2002). Is "service with a smile" enough? Authenticity of positive displays during service encounters. *Organizational Behavior and Human Decision Processes, 96*, 38–55.

Guéguen, N., & Martin, A. (2009). Incidental similarity facilitates behavioral mimicry. *Social Psychology, 40*, 88–92.

Haase, R. F., & Tepper, D. T. (1972). Nonverbal components of empathetic communication. *Journal of Counseling Psychology, 19*, 417–424.

Hagemann, D., Naumann, E., Lürken, A., Becker, G., Maier, S., & Bartussek, D. (1999). EEG asymmetry, dispositional mood and personality. *Personality and Individual Differences, 27*, 541–568.

Hancock, J. T., Gee, K., Ciaccio, K., & Link, J. M. H. (2008). I'm sad you're sad: Emotional contagion in CMC. *Proceedings of the ACM 2008 conference on computer supported cooperative work* (pp. 295–298). New York: ACM Press.

Hareli, S., & Rafaeli, A. (2008). Emotion cycles: On the social influence of emotion in organisations. *Research in Organisational Behavior, 28*, 35–59.

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1992). Primitive emotional contagion. In M. S. Clark (Ed.), *Emotion and social behaviour: Review of personality and social psychology* (pp. 151–177). California: Sage.

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

Hatfield, E., Rapson, R., & Le, Y. L. (2008). Emotional contagion and empathy. In J. Decety, & W. Ickes (Eds.), *The neuroscience of empathy* (pp. 28–51). Boston: MIT Press.

Hennig-Thurau, T., Groth, M., Paul, M., & Gremler, D. D. (2006). Are all smiles created equal? How emotional contagion and emotional labor affect service relationships. *Journal of Marketing, 70*, 58–73.

Hess, U., Philippot, P., & Blairy, S. (1998). Facial reactions to emotional facial expressions: Affect or cognition? *Cognition and Emotion, 12*, 509–531.

Hill, A. L., Rand, D. G., Nowak, M. A., & Christakis, N. A. (2010). Emotions as infectious diseases in a large social network: The SISa model. *Proceedings of the Royal Society, 277*, 3827–3853.

Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling.* Berkley: University of California Press.

Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership: Effectiveness and personality. *American Psychologist, 49*, 493–504.

Hogan, R., & Kaiser, R. B. (2005). What we know about leadership. *Review of General Psychology, 9*, 169–180.

Hong, Y., Liao, H., Hu, J., & Jiang, K. (2013). Missing link in the service profit chain: A meta-analytic review of the antecedents, consequences, and moderators of service climate. *Journal of Applied Psychology, 98*, 237–267.

Humphrey, R. H., Pollack, J. M., & Hawver, T. (2008). Leading with emotional labor. *Journal of Managerial Psychology, 23*, 151–168.

Huy, Q. N. (1999). Emotional capability, emotional intelligence, and radical change. *Academy of Management Review, 24*, 325–345.

Ilies, R., Curşeu, P. L., Dimotakis, N., & Spitzmuller, M. (2013). Leaders' emotional expressiveness and their behavioral and relational authenticity: Effects on followers. *European Journal of Work and Organizational Psychology, 22*, 4–14.

Ilies, R., Wagner, D. T., & Morgeson, F. P. (2007). Explaining affective linkages in teams: Individual differences in susceptibility to emotional contagion and individualism-collectivism. *Journal of Applied Psychology, 92*, 1140–1148.

Iyer, A., & Leach, C. W. (2008). Emotion in inter-group relations. *European Review of Social Psychology, 19*, 86–125.

Johnson, S. K. (2008). I second that emotion: Effects of emotional contagion and affect at work on leader and follower outcomes. *The Leadership Quarterly, 19*, 1–19.

Johnson, S. K. (2009). Do you feel what I feel? Mood contagion and leadership outcomes. *The Leadership Quarterly, 20*, 814–827.

Johnson, S. K., Bettenhausen, K., & Gibbons, E. (2009). Realities of working in virtual teams: Affective and attitudinal outcomes of using computer-mediated communication. *Small Group Research, 40*, 623–650.

Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. *Journal of Applied Psychology, 85*, 751–765.

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology, 87*, 765–780.

Judge, T. A., Piccolo, R. F., & Kosalka, T. (2009a). The bright and dark side of leader traits: A review and theoretical extension of the leader trait paradigm. *The Leadership Quarterly, 20*, 855–875.

Judge, T. A., Woolf, E. F., & Hurst, C. (2009b). Is emotional labor more difficult for some than others? A multi-level, experience sampling study. *Personnel Psychology, 62*, 57–88.

Kelly, J. R., & Barsade, S. G. (2001). Mood and emotion in small groups and work teams. *Organisational Behavior and Human Decision Processes, 86*, 99–130.

Kilmann, R. H., O'Hara, L. A., & Strauss, J. P. (2009). Developing and validating a quantitative measure of organizational courage. *Journal of Business and Psychology, 25*, 15–23.

Ladkin, D., & Taylor, S. S. (2010). Enacting the 'true self': Towards a theory of embodied authentic leadership. *The Leadership Quarterly, 21*, 64–74.

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.

Lee, T., Dolan, R. J., & Critchley, H. D. (2008). Controlling emotional expression: Behavioral and neural correlates of nonimitative emotional responses. *Cerebral Cortex, 18*, 104–113.

Lee, N., Senior, C., & Butler, M. (2012). Leadership research and cognitive neuroscience: The state of this union. *The Leadership Quarterly, 23*, 213–218.

Liao, H., & Rupp, D. (2005). The impact of justice climate and justice orientation on work outcomes: A cross-level multifoci framework. *Journal of Applied Psychology, 90*, 242–256.

Liden, R. C., & Antonakis, J. (2009). Considering context in psychological leadership research. *Human Relations, 62*, 1587–1605.

Lindebaum, D., & Zundel, M. (2013). Not quite a revolution: Scrutinizing organizational neuroscience in leadership studies. *Human Relations, 66*, 857–877.

Lishner, D. A., Cooter, A. B., & Zald, D. H. (2008). Rapid emotional contagion and expressive congruence under strong test conditions. *Journal of Nonverbal Behavior, 32*, 225–239.

Lucas, R. E., & Deiner, E. (2001). Understanding extraverts' enjoyment of social situations: The importance of pleasantness. *Journal of Personality and Social Psychology, 81*, 343–356.

Lucas, R. E., & Fujita, F. (2000). Factors influencing the relation between extraversion and pleasant effect. *Journal of Personality and Social Psychology, 79*, 1039–1056.

Madera, J. M., & Smith, D. B. (2009). The effects of leader negative emotions on evaluations of leadership in a crisis situation: The role of anger and sadness. *The Leadership Quarterly, 20*, 103–114.

McIntosh, D. N. (2006). Spontaneous facial mimicry, liking and emotional contagion. *Polish Psychological Bulletin, 37*, 31–42.

Moody, E. J., McIntosh, D. N., Mann, L. J., & Weisser, K. R. (2007). More than mere mimicry? The influence of emotion on rapid facial reactions to faces. *Emotion, 7*, 447–457.

Morossanova, V. I. (2003). Extraversion and neuroticism: The typical profiles of self-regulation. *European Psychologist, 8*, 279–288.

Neumann, R., & Strack, F. (2000). "Mood contagion": The automatic transfer of mood between persons. *Journal of Personality and Social Psychology, 79*, 211–223.

Nielsen, K., & Cliel, B. (2011). Under which conditions do middle managers exhibit transformational leadership behaviors? An experience sampling method study on the predictors of transformational leadership behaviors. *The Leadership Quarterly, 22*, 344–352.

Padilla, A., Hogan, R., & Kaiser, R. B. (2007). The toxic triangle: Destructive leaders, susceptible followers, and conducive environments. *The Leadership Quarterly, 18*, 176–194.

Páez, D., Basabe, N., Ubillos, S., & González-Castro, J. L. (2007). Social sharing, participation in demonstrations, emotional climate, and coping with collective violence after the March 11th Madrid bombings. *Journal of Social Issues, 63*, 323–337.

Pastor, J. C., Mayo, M., & Shamir, B. (2007). Adding fuel to fire: the impact of followers' arousal on ratings of charisma. *Journal of Applied Psychology, 92*, 1584–1596.

Pescosolido, A. T. (2002). Emergent leaders as managers of group emotion. *The Leadership Quarterly, 13*, 583–599.

Pillai, R., & Meindl, J. (1998). Context and charisma: A "meso" level examination of the relationship of organic structure, collectivism, and crisis to charismatic leadership. *Journal of Management, 24*, 643–671.

Preston, S. D., & de Waal, F. B. M. (2002). Empathy: Its ultimate and proximate bases. *Behavioral and Brain Sciences, 25*, 1–72.

Pugh, S. D. (2001). Service with a smile: Emotional contagion in the service encounter. *Academy of Management Journal, 44*, 1018–1027.

Purvanova, R. K., & Bono, J. E. (2009). Transformational leadership in context: Face-to-face and virtual teams. *The Leadership Quarterly, 20*, 343–357.

Rhee, S. Y. (2007). Group emotions and group outcomes: The role of group-member interactions. In E. A. Mannix, M. A. Neale, & C. P. Anderson (Eds.), *Research on managing groups and teams volume 10: Affect and groups* (pp. 65–95). Amsterdam: Elsevier.

Rimé, B. (2007). The social sharing of emotion as an interface between individual and collective processes in the construction of emotional climates. *Journal of Social Issues, 63*, 307–322.

Robinson, M. D., Solberg, E. C., Vargas, P. T., & Tamir, M. (2003). Trait as default: extraversion, subjective well-being, and the distinction between neutral and positive events. *Journal of Personality and Social Psychology, 85*, 517–527.

Robinson, M. D., Wilkowski, B. M., Kirkeby, B. S., & Meier, B. P. (2006). Stuck in a rut: Perseverative response tendencies and the neuroticism-distress relationship. *Journal of Experimental Psychology: General, 135*, 78–91.

Rubin, R. S., Munz, D. C., & Bommer, W. H. (2005). Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal, 48*, 845–858.

Salanova, M., Agut, S., & Pieró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology, 90*, 1217–1227.

Sanchez-Burks, J., & Huy, Q. H. (2009). Emotional aperture and strategic change: The accurate recognition of collective emotions. *Organization Science, 20*, 22–34.

Seger, C. R., Smith, E. R., & Mackie, D. M. (2009). Subtle activation of a social categorization triggers group-level emotions. *Journal of Experimental Social Psychology, 45*, 460–467.

Shamay-Tsoory, S. G. (2011). The neural bases for empathy. *The Neuroscientist, 17*, 18–24.

Shamay-Tsoory, S. G., Aharon-Peretz, J., & Perry, D. (2009). Two systems for empathy: A double disassociation between emotional and cognitive empathy in inferior frontal gyrus versus ventromedial prefrontal lesions. *Brain, 132*, 617–627.

Singer, T., & Lamm, C. (2009). The social neuroscience of empathy. *Annals of the New York Academy of Sciences, 1156*, 81–96.

Smillie, L. D., Cooper, A. J., Wilt, J., & Revelle, W. (2012). Do extraverts get more bang for the buck? Refining the affective-reactivity hypothesis of extraversion. *Journal of Personality and Social Psychology, 103*, 306–326.

Smith, E. R., Seger, C. R., & Mackie, D. M. (2007). Can emotions truly be group level? Evidence regarding four conceptual criteria. *Journal of Personality and Social Psychology, 93*, 431–446.

Sönnby-Borgström, M., Jönsson, P., & Svensson, O. (2003). Emotional empathy as related to mimicry reactions at different levels of information processing. *Journal of Nonverbal Behavior, 27*, 3–23.

Spell, C. S., & Arnold, T. J. (2007). A multi-level analysis of organizational justice climate, structure, and employee mental health. *Journal of Management, 33*, 724–751.

Staples, D. S., & Webster, J. (2008). Exploring the effects of trust, task interdependence and virtualness on knowledge sharing in teams. *Information Systems Journal, 18*, 617–640.

Stel, M., & Vonk, R. (2010). Mimicry in social interaction: Benefits for mimickers, mimickees, and their interaction. *British Journal of Psychology, 101*, 311–323.

Sy, T., & Choi, J. N. (2013). Contagious leaders and followers: Exploring multi-stage mood contagion in a leader activation and member propagation (LAMP) model. *Organizational Behavior and Human Decision Processes, 122*, 127–140.

Sy, T., Choi, J. N., & Johnson, S. K. (2013). Reciprocal interactions between group perceptions of leader charisma and group mood through mood contagion. *The Leadership Quarterly, 24*, 463–476.

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

Tamietto, M., Castelli, L., Vighetti, S., Perozzo, P., Geminiani, G., Weiskrantz, L., et al. (2009). Unseen facial and bodily expressions trigger fast emotional reactions. *Proceedings of the National Academy of Sciences, 106*, 17661–17666.

Tan, H. H., Foo, M. D., & Kwek, M. H. (2004). The effects of customer personality traits on the display of positive emotions. *Academy of Management Journal, 47*, 287–296.

Tee, E. Y. J., Ashkanasy, N. M., & Paulsen, N. (2013a). The influence of follower mood on leader mood and task performance: An affective, follower-centric perspective of leadership. *The Leadership Quarterly, 24*, 496–515.

Tee, E. Y. J., Paulsen, N., & Ashkanasy, N. M. (2013b). Revisiting followership through a social identity perspective: The role of collective follower emotion and action. *The Leadership Quarterly, 24*, 902–918.

Thomas, G., Martin, R., & Riggio, R. E. (2013). Leading groups: Leadership as a group process. *Group Process & Intergroup Relations, 16*, 3–16.

Thomas, E. F., McGarty, C., & Mavor, K. I. (2009). Aligning identities, emotions, and beliefs to create commitment to sustainable social and political action. *Personality and Social Psychology Review, 13*, 194–218.

Torrente, P., Salanova, M., & Llorens, S. (2013). Spreading engagement: On the role of similarity in the positive contagion of team work engagement. *Journal of Work and Organizational Psychology, 29*, 153–159.

Totterdell, P. (2000). Catching moods and hitting runs: Mood linkage and subjective performance in professional sports teams. *Journal of Personality and Social Psychology, 85*, 848–859.

Totterdell, P., Kellett, S., Teuchmann, K., & Briner, R. B. (1998). Evidence of mood linkage in work groups. *Journal of Personality and Social Psychology, 74*, 1504–1515.

Totterdell, P., Wall, T., Holman, D., Diamond, H., & Epitropaki, O. (2004). Affect networks: A structural analysis of the relationship between work ties and job-related affect. *Journal of Applied Psychology, 89*, 854–867.

Trout, D. L., & Rosenfeld, H. M. (1980). The effect of postural lean and body congruence on the judgment of psychotherapeutic rapport. *Journal of Nonverbal Behavior, 4*, 176–190.

Tsai, W., & Huang, Y. (2002). Mechanisms linking employee affective delivery and customer behavioral intentions. *Journal of Applied Psychology, 87*, 1001–1008.

Uhl-Bien, M., Riggio, R. E., Lowe, K. B., & Carsten, M. K. (2014). Followership theory: A review and research agenda. *The Leadership Quarterly, 25*, 83–104.

van Kleef, G., Homan, A. C., Beersma, B., van Knippenberg, D., van Knippenberg, B., & Damen, F. (2009). Searing sentiment or cold calculation? The effects of leader emotional displays on team performance depend on follower epistemic motivation. *Academy of Management Journal, 52*, 562–580.

van Knippenberg, D. (2011). Embodying who we are: Leader group prototypicality and leadership effectiveness. *The Leadership Quarterly, 22*, 1078–1091.

van Knippenberg, D., & Hogg, M. A. (2003). A social identity model of leadership effectiveness in organizations. *Research in Organizational Behavior, 25*, 243–295.

Venus, M., Stam, D., & van Knippenberg, D. (2013). Leader emotion as a catalyst of effective leader communication of visions, value-laden messages, and goals. *Organizational Behavior and Human Decision Processes, 122*, 53–68.

Verbeke, W. (1997). Individual differences in emotional contagion of salespersons: Its effect on performance and burnout. *Psychology & Marketing, 14*, 617–636.

Visser, V. A., van Knippenberg, D., van Kleef, G. A., & Wisse, B. (2013). How leader displays of happiness and sadness influence follower performance: Emotional contagion and creative versus analytical performance. *The Leadership Quarterly, 24*, 172–188.

Volmer, J. (2012). Catching leaders' mood: Contagion effects in teams. *Administrative Sciences, 2*, 203–220.

Waldman, D. A., Balthazard, P. A., & Peterson, S. J. (2011). Social cognitive neuroscience and leadership. *Leadership Quarterly, 22*, 1092–1106.

Walter, F., & Bruch, H. (2007). Investigating the emotional basis of charismatic leadership: The role of leaders' positive mood and emotional intelligence. In C. E. J. Härtel, N. M. Ashkanasy, & W. J. Zerbe (Eds.), *Research on emotion in organisation volume 3: Functionality, intentionality and morality* (pp. 55–85). Amsterdam: Elsevier.

Walter, F., & Bruch, H. (2010). Structural impacts on the occurrence and effectiveness of transformational leadership: An empirical study at the organizational level of analysis. *The Leadership Quarterly, 21*, 765–782.

Wang, G., Oh, I., Courtright, S. H., & Colbert, A. E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group & Organization Management, 36*, 223–270.

Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin, 96*, 465–490.

Watson, D., & Clark, L. A. (1997). Extraversion and its positive emotional core. In R. Hogan, J. A. Johnson, & S. R. Briggs (Eds.), *Handbook of Personality Psychology* (pp. 767–793). San Diego: Academic Press.

Wild, B., Erb, M., & Bartels, M. (2001). Are emotions contagious? Evoked emotions while viewing emotionally expressive faces: Quality, quantity, time course and gender differences. *Psychiatry Research, 102*, 109–124.

Yang, J., & Mossholder, K. W. (2004). Decoupling task and relationship conflict: The role of intragroup emotional processing. *Journal of Organizational Behavior, 25*, 589–605.

Zaccaro, S. J. (2007). Trait-based perspectives of leadership. *American Psychologist, 62*, 6–16.

Zelenski, J. M., & Larsen, R. J. (1999). Susceptibility to affect: A comparison of three personality taxonomies. *Journal of Personality and Social Psychology, 67*, 761–791.