THE TWO-FACED LEADER:

THE EFFECTS OF LEADER EMOTIONAL INCONSISTENCY ON FOLLOWER

CREATIVE PERFORMANCE

JAKOB STOLLBERGER

Doctor of Philosophy

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THESIS SUMMARY

Based on a review of the literatures pertaining to leadership, affect, and creative performance, the studies conducted as part of this thesis aim at testing a research model that examines how and under which conditions leader emotional inconsistency between happiness and anger is related to follower creative performance. For an experimental test of the proposed research model I collected data from 94 followers for whom a leader-follower interaction was simulated using a video manipulation. Moderated mediation analyses revealed that leader emotional inconsistency was positively associated with follower creative performance via increases in creative process engagement, but only for followers with high levels of epistemic motivation, which sheds light on the importance of follower's information processing capabilities when faced with complex emotional leadership. I replicated the results of the first study in a second experiment where a leader-follower interaction was simulated using a scenario manipulation. Using data collected from 81 followers, moderated mediation analyses showed that leader displays of emotional inconsistency were positively related to creative performance via increases in creative process engagement for followers with high levels of epistemic motivation. Both experimental studies provide evidence towards the directionality of the examined interrelationships across different types of experimental manipulations employed. Finally, I replicated the research model of this thesis in a field setting using a measurement scale of leader emotional inconsistency specifically developed for this study. Week-level data was collected from 60 leader-follower dyads working in two organisations and providing a total of 253 matched weekly leader and follower responses. Multilevel moderated mediation analyses showed that follower weekly creative performance follows from weekly leader displays of emotional inconsistency via increases in weekly creative process engagement for followers with high epistemic motivation. Taken together, the studies conducted provide both internal and external validity to the theoretically derived research model of this thesis.

Keywords: Leader emotional inconsistency; happiness; anger; creative process engagement; creative performance; epistemic motivation; experiment; diary study; multilevel research; EASI theory

DEDICATION

Kedves Tatámnak, nyugodj békében.

To my dear grandpa, may you rest in peace.

Szász Mihály

(1925 – 2016)

ACKNOWLEDGEMENTS

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CHAPTER 1: INTRODUCTION

"I have a dream, that one day this nation will rise up

and live out the true meaning of its creed."

Dr Martin Luther King Jr.

1.1 INTRODUCTION

The above quote was taken from the famous *I have a dream* speech (King, 1963) by American civil rights leader Dr Martin Luther King Jr., in which he advocated for an end to racism in the United States of America. The speech serves as a typical example of how effective vision communication has the power to influence a society at large and showcases the importance of communication skills for effective leadership (e.g., Stam, Lord, van Knippenberg, & Wisse, 2014). In fact, long before Dr King many public leadership figures have already established regular events for the sole purpose of communicating their respective agenda to followers. For example, in the United Kingdom Queen Elizabeth II as formal Head of State holds her Queen's Speech at the state opening of parliament outlining governmental plans for the upcoming year (BBC, 2010). In a similar vein, US Presidents deliver their State of the Union Address to the American people in an attempt to rally support for their policies (US House of Representatives, 2016).

Importantly, the manner in which these leaders communicate their visions, ideas, and convictions has substantial implications for how effectively they can influence followers (Goethals, 2005; Mio, Riggio, Levin, & Reese, 2005). However, the relevance of communication skills for leadership effectiveness stretches beyond the public domain and also concerns organisational leadership (Stam, van Knippenberg, & Wisse, 2010). What is more, the Development Economics Research Group recently suggested that the economic value of soft skills such as effective communication for the UK economy would be as high as £88 billion (Coughlan, 2015).

As part of the so-called affective revolution in organisational behaviour research (e.g., Barsade, Brief, & Spataro, 2003), empirical evidence started to accumulate that emphasises the role of emotions as a catalyst for effective leader communication (Van Kleef, Van Doorn, Heerdink, & Koning, 2011). In fact, well-known terms to describe great leaders including charismatic, inspirational, or visionary seem to be closely linked to the effective use of emotional expressions, that is, the communication of emotions, gestures, as well as tone of voice (Bono & Ilies, 2006; Erez, Misangyi, Johnson, LePine, & Halverson, 2008; Joseph, Dhanani, Shen, McHugh, & McCord, 2015; Venus, Stam, & van Knippenberg, 2013). Theorists even go so far as to ascribe greater importance to leader emotional and non-verbal cues for influencing followers than to the actual content of their messages (van Kleef, Homan, & Cheshin, 2012). By and large, emotions are potent drivers of organisational effectiveness because they affect thoughts, experiences, and ultimately behaviours of individuals and teams at work (Elfenbein, 2007). Organisational leaders, in turn, can leverage this emotional impact by purposefully attempting to influence their followers in a desired direction through the display of emotional expressions (Netzer, Van Kleef, & Tamir, 2015).

What the concrete emotional expressions are that leaders should display to exercise this emotional influence over followers is currently the subject of vigorous scholarly discussions (e.g., Lindebaum & Jordan, 2012; van Kleef, 2014). In this respect, it is important to consider that the influence of emotional expressions on observers changes depending on the discrete emotion that is displayed (van Kleef et al., 2012). For example, in a negotiation setting the display of sadness affects the outcome in a different way than displays of anger (Sinaceur, Kopelman, Vasiljevic, & Haag, 2015; Sinaceur & Tiedens, 2006). Similarly, the personality makeup of observers may determine how leader emotional influence translates into follower behaviour. Taking the example of angry emotional expressions, if observers are open to new experiences (i.e., in case of high epistemic motivation)

perceiving an angry leader can boost their performance (van Kleef, Homan, et al., 2009). However, if observers highly value social harmony (i.e., in case of high agreeableness), leader anger will decrease performance because it will be seen as a deliberate breach of social conventions (Van Kleef, Homan, Beersma, & van Knippenberg, 2010). Another major shortcoming of past research on leader emotional influence is that most scholars implicitly assumed that leaders consistently display emotional expressions over time, which however, is unrealistic (Frijda, 1986; van Kleef et al., 2012). As an illustration, for a leader to be consistently happy he or she would need to display happy emotional expressions all the time, which contradicts recent research on emotional labour variability that showcased the possibility of daily changes in deep and surface acting (B. A. Scott, Barnes, & Wagner, 2012). Another study showed that even momentary changes (i.e., changes every 200 milliseconds) in both felt emotions and outward emotional displays are possible in reaction to interpersonal interactions (Gabriel & Diefendorff, 2015). According to theory on the social-functional role of emotions, leader emotional displays can change frequently, even fluctuations between different emotional states are possible, which in turn has implications for work-related outcomes (Frijda, 1986; van Kleef et al., 2012).

    In order to address this gap, this thesis aims to investigate the effects of leader emotional inconsistency on follower work-related outcomes, as well as underlying mechanisms and boundary conditions of this relationship. Leader emotional inconsistency involves leaders displaying emotional expressions that fluctuate between different discrete emotions over the course of a single encounter (Frijda, 1986; Sinaceur, Adam, Van Kleef, & Galinsky, 2013). Following from this definition, the decision which discrete emotions to choose in order to display emotional inconsistency has substantial implications. As different emotional expressions such as happiness or sadness may impact observers in different ways (e.g., being cheerful or showing sympathy, respectively), different combinations of

emotional inconsistency may equally lead to differential effects on observer behaviour (Sinaceur et al., 2013; van Kleef et al., 2012). Thus, the present study will focus on fluctuations between happiness and anger to induce leader emotional inconsistency. Several scholars suggest that alternating emotional displays between happy and angry represents a typical case of emotional inconsistency (Frijda, 1986; Sinaceur et al., 2013). Happiness and anger are not only easily recognisable emotions but both emotions reflect high levels of arousal and can be seen as their opposites in terms of valence (Russell & Barrett, 1999; Russell, 1980).

To date, there is very little research examining the effects of emotional inconsistency between happiness and anger. A single study exists that investigated the effects of alternating happy and angry displays within the scope of a competitive interaction (i.e., a negotiation setting; Sinaceur et al., 2013). Results showed that inconsistency in a negotiation leads to increased observer concessions and that this effect is mediated by observer's feelings of a lack of control (Sinaceur et al., 2013). In contrast, this thesis aims at examining the effects of emotional inconsistency in a more cooperative setting such as a leader – follower relationship, an area where there is currently a paucity of research.

Follower creative performance was chosen as the focal outcome of this investigation for two reasons. Firstly, creative behaviours are particularly affect-driven (Baas, De Dreu, & Nijstad, 2008), thus inviting the influence of leader emotional expressions. Secondly, creative performance as an essential ingredient for innovation is widely considered as a key driver of organisational effectiveness (Anderson, Potocnik, & Zhou, 2014).

By investigating leader emotional inconsistency I go beyond the current conceptualisation of leader emotional influence that merely involves consistent and unchanging leader emotional expressions (e.g. Van Kleef, Van Doorn, Heerdink, & Koning, 2011). Thus, I complement theory on leader emotional expressions by, for the first time, investigating the effect of leader emotional inconsistency on follower

work-related outcomes such as creative performance. Further, I extend the Emotions as Social Information theory (EASI; van Kleef et al., 2012) to accommodate the investigation of inconsistent emotional expressions. On the basis of an extended EASI theory, I argue for a positive relationship between leader emotional inconsistency and follower creative performance through increases in follower creative process engagement, but only for followers with high levels of epistemic motivation, who are thus able to process the social information conveyed by leader emotional inconsistency.

I provide reviews on the leadership and affect, as well as on the creative performance literatures in Chapters 2-3, which were written to identify relevant gaps in the literature as well as to deduce the research question of this thesis.

Chapter 4 provides an overview of general methodological matters and complements the methods sections of each individual study reported as part of this thesis.

In order to establish internal validity, in Chapter 5 I test my hypotheses utilising an experimental design featuring a video manipulation of leader emotional inconsistency. In Chapter 6, I replicate the aforementioned experiment, however, this time using a scenario manipulation of leader emotional inconsistency. This was done to show that any effects obtained are independent of the type of manipulation employed. Chapter 7 serves the purpose of developing a leader emotional inconsistency scale (LEIS) for field research. Finally, in Chapter 8 I replicate the research model of Chapters 5-6 and use the LEIS developed in Chapter 7 in a field setting in order to establish external validity.

Finally, in Chapter 9 I discuss and integrate the findings of all studies conducted as part of this thesis, elaborate on strengths and weaknesses, suggest avenues for future research, and offer a final conclusion.

1.2 CONTRIBUTIONS

1.2.1 Contributions to Theory

The studies described in this thesis contribute to the literature on leader emotional expressions in several ways. Firstly, I extend the Emotions as Social Information framework (van Kleef, 2009) to accommodate the investigation of leader emotional inconsistency and thus provide a guiding platform for future research in this area. So far, past research drawing from EASI theory has focused on how consistently displayed emotional expressions such as happiness (Visser, van Knippenberg, van Kleef, & Wisse, 2013) or anger (van Kleef, Homan, et al., 2009) can affect follower work-related outcomes. I build on this work by examining how inconsistently displayed leader happiness and anger can influence follower creative performance, an important work-related outcome for most organisations (Anderson et al., 2014). By doing so, I provide an avenue for future research on leader emotional influence and encourage researchers to move away form the prevalent viewpoint of emotional consistency and to instead embrace more complex conceptualisations of emotional leadership (Rothman & Melwani, in press).

Second, this thesis represents the first attempt to investigate the effects of displayed leader emotional inconsistency as part of a collaborative leader-follower relationship. I can therefore advance the criterion space of leader emotional inconsistency adding creative performance to its nomological net. Although leader emotional inconsistency is likely to occur in a leader – follower context (Sinaceur et al., 2013), no study to date has investigated this proposition. In doing so, I follow the suggestion of van Kleef and colleagues (2012, p. 332) to "examine the effects of changing emotions on work outcomes", and apply one of the key tenets of the emotion literature to the study of interpersonal emotional influence, namely the concept of transient change of emotion states (N.M Ashkanasy, 2003).

Third, I explore the mechanisms through which leader emotional inconsistency affects follower creative performance. According to EASI theory the observation of leader emotional displays influences followers' feelings, attitudes, thoughts, and behaviours, including creative behaviours (van Kleef, Anastasopoulou, & Nijstad, 2010; van Kleef et al., 2012). Whilst this theory-based prediction on the effects of leader emotional expressions is sufficiently broad, it currently lacks specificity with regards to the concrete underlying mechanisms through which emotional expressions affect work outcomes such as creative performance. Thus, I argue for a distinct underlying mechanism that helps explain the relationship between leader emotional inconsistency and follower creative performance: creative process engagement.

Fourth, I examine a boundary condition of the relationship between leader emotional inconsistency, creative process engagement, and creative performance by considering follower levels of epistemic motivation in my studies. In doing so, I am the first to address the theoretical and empirical question of whether leader influence by displaying emotional inconsistency in a collaborative leader-follower context is conditional on follower's information processing capabilities. Drawing from EASI theory (van Kleef, 2009), I argue that only employees with high epistemic motivation benefit from leader displays of emotional inconsistency because they are the only one's capable of decoding the social information inherent in alternating leader emotional displays.

Finally, I make an important contribution to the literature on interpersonal emotional influence in Chapter 7 by developing a scale to assess leader emotional inconsistency (LEIS) between happiness and anger for use in a field setting. Through the development of the LEIS I am not only able to establish external validity for my research model in Study 4 but also provide a tool that would allow researchers to conduct field research on the relationship between inconsistent leader emotional displays and follower outcomes in the future.

1.2.2 Contributions to Practice

Beyond the aforementioned theoretical contributions, this thesis offers recommendations for organisational practice as well.

First, my findings demonstrate the interplay between leader emotional inconsistency and the personality makeup of followers and indicate that such leader emotional influencing tactics do not increase the creative performance of every employee. More specifically, this communicates to practitioners that only those followers benefit from leader displays of emotional inconsistency that are able to process the social information conveyed by emotional inconsistency (i.e., those employees with high levels of epistemic motivation). These results can guide broader organisational recruitment efforts, for example, by sifting out applicants with low levels of epistemic motivation for jobs where creative performance is a prerequisite.

Chapter 8 presented in this thesis provides practitioners with an overview of the positive employee work outcomes that are related to leader emotional inconsistency, namely increased creative process engagement, as well as subsequent creative performance. This could prompt organisations relying on the innovative potential of their employees to train managers in appropriate emotional and non-verbal communication tactics to better facilitate their follower's creative output.

Finally, all research summarised in this thesis can inform the evaluation of leadership development initiatives in organisations. Measures of the important concepts featured in my studies (e.g., leader emotional inconsistency, creative process engagement, epistemic motivation) can be added to existing annual employee surveys to be able to monitor the impact of leader emotional influence on a wider array of relevant key performance indicators other than firm performance.

CHAPTER 2:

OVERVIEW OF THE LITERATURE ON LEADERSHIP AND AFFECT

2.1 CHAPTER SUMMARY

This chapter provides a literature review on leadership and affect with an emphasis on leader displays of inconsistent emotions. The aim of the chapter is to review theories as well as current and past research on leadership and affect to the end of identifying the research gaps that will be addressed by the present thesis. The chapter opens with various definitions of constructs discussed in the leadership and affect literature followed by an overview of their conceptualisations on both the state and trait level. Next, various theories will be discussed that could act as frameworks for the current investigation in light of the fit between their theoretical propositions and the requirements of the present research project. Having introduced the Emotions as Social Information theory (EASI; van Kleef, de Dreu, & Manstead, 2009) as the guiding theoretical framework of this thesis, theoretical propositions following from EASI are presented and compared to available empirical evidence. The chapter closes with a formulation of a research question to be addressed by the current investigation.

2.2 CONCEPTUALISATIONS OF LEADERSHIP AND AFFECT

Leadership can be defined as an interpersonal process whereby leaders attempt to mobilise and motivate followers towards the completion of collective objectives (e.g.; organisational goals, the fulfilment of a mission or vision; Yukl, 2006). A necessary precondition for a person of higher hierarchical standing (i.e., the leader) to successfully influence a person with a lower hierarchical standing (i.e., the follower) is an interpersonal relationship (Uhl-Bien, 2006).

Affect, in turn, can be seen as one of the most potent means through which leader influence is enacted in a leader-follower relationship (Frijda, 1986; Rajah,

Song, & Arvey, 2011). A clear definition of affect, however, turns out to be a difficult endeavour as it is mostly used as an umbrella term subsuming various affective phenomena including affective states as well as traits (Elfenbein, 2007; Weiss & Cropanzano, 1996). State affect is often subdivided into moods and discrete emotions. Moods are defined as a low-intensity, rather diffuse state (e.g., a bad mood) with a longer duration (Russell & Barrett, 1999), whereas discrete emotions refer to distinct short-term states (e.g., happiness or sadness) that have a relatively clear cause (Frijda, 1986; Lazarus, 1991). Trait affect on the other hand refers to dispositional tendencies of individuals towards experiencing certain affective states and can thus be seen as affective predispositions (Elfenbein, 2007; Lazarus, 1991).

The following sections will emphasise leader expressions of inconsistent emotions from an affective state perspective as the subject of investigation in the present thesis. Furthermore, it will compare and contrast different conceptualisations of affective states with affective predispositions such as trait affectivity or emotional intelligence, which have also been widely discussed in the literature on leadership and affect. I exclude more evaluative judgements from this review that may be tangentially related to affect such as leader liking or optimism in order to provide a more unambiguous account of the literature on leadership and affect (van Knippenberg & van Kleef, 2016). Table 2.1 provides an overview of both state and trait conceptualisations of affect at work that have been related to leadership in past research.

TABLE 2.1
Overview of State and Trait Conceptualisations of Leadership and Affect

Construct	S/T[1]	Source	Definition
Intraindividual affect			
Emotion	S	Lazarus (1991)	Discrete feeling states of short duration with a realtively clear cause
Mood	S	Russell and Barrett (1999)	Diffuse state of longer duration without a clear cause
Emotional ambivalence	S	Fong (2006)	The co-occurence of positive and negative emotions
Affective lability	S	Amabile et al. (2005)	A fluctuation in affective experience from negative to positive affect
Interindividual affect			
Trait affectivity	T	Joseph et al. (2015)	A stable, dispositional positive or negative affective influence on leadership
Empathy	T	Mehrabian and Epstein (1972)	Cognitively understanding and / or feeling the emotion of another person whilst being compassionate
Emotional intelligence	T	Mayer et al. (2008)	The ability to engage in sophisticated information processing about one's own and other's emotions and the ability to use this information as a guide to thinking and behaviour
Emotional consistency	S	van Kleef (2009)	The expression of one's affective state via observable non-verbal indicators such as facial expressions
Emotional inconsistency	S	Sinaceur et al. (2013)	The alternation between different discrete emotions over the course of a single encounter
Emotional transitions	S	Filipowicz et al. (2011)	The movement between two or more affective, or emotional states
Emotional ambivalence	S	Rothman (2011)	The expression of tension and conflict resulting from the simultaneous experience of two emotional states that differ in valence

Note. [1]= State versus trait conceptualisation of affect

2.2.1 State Conceptualisations of Leadership and Affect

The predominant focus of past affect research has been on *intraindividual affect*, that is the cognitive and behavioural consequences of and individual's feeling states (Beal, Weiss, Barros, & MacDermid, 2005; Frijda, 1986). These

feeling states encompass short-term discrete emotions such as happiness (Elfenbein, 2007), more complex emotional phenomena such as emotional ambivalence (i.e., the co-occurrence of positive and negative emotions; Fong, 2006) or affective lability (i.e., the fluctuation in affective experience across the range of negative to positive affect; Amabile, Barsade, Mueller, & Staw, 2005), as well as relatively long-term affective states such as moods (Russell & Barrett, 1999). The way individuals feel (e.g., being in a bad mood) informs their judgement and can thus consciously and / or unconsciously change their attitudes and behaviour (e.g., being impolite to a work colleague; van Knippenberg & van Kleef, 2016).

More recently, researchers started to investigate the *interpersonal* effects of affect by acknowledging that a person's affective states may have implications for others who observe them (Hatfield, Cacioppo, & Rapson, 1993; Keltner & Haidt, 1999). When looking at the determinants of more or less successful leader-follower relationships, interpersonal emotional expressions represent a potent means of social influence for leaders (Van Kleef et al., 2011). Within the research stream investigating the impact of consistently expressed discrete emotions (e.g., expressed by leaders towards followers), emotional expressions involve a range of observable indicators such as facial expressions, body movements, as well as pitch and tone of voice (van Knippenberg & van Kleef, 2016). By the term *consistent emotional expressions* we mean an individual's constant expression of a discrete emotion (e.g., happiness) and the absence of fluctuation or change between several discrete emotions (van Kleef, Homan, & Cheshin, 2012). Conversely, *inconsistent emotional expressions* involve said fluctuation between different discrete emotions over the course of a single encounter (e.g., between happiness and anger; Frijda, 1986; Sinaceur, Adam, Van Kleef, & Galinsky, 2013). What is more, inconsistent emotional expressions can be further subdivided

according to whether two or more discrete emotions are expressed simultaneously or sequentially (Rothman & Melwani, 2016). An example of simultaneous emotional inconsistency would be expressed emotional ambivalence, defined as the simultaneous expression of positive and negative emotions (Rothman & Northcraft, 2015; Rothman, 2011). Sequential emotional inconsistency involves the consecutive movement between two or more different emotional expressions (Rothman & Melwani, 2016), for example in the case of emotional inconsistency as defined by Sinaceur and colleagues (2013) or in the case of affective transitions (Filipowicz, Barsade, & Melwani, 2011). Importantly, as inconsistent emotional expressions involve at least two distinct discrete emotions, the decision which discrete emotions are chosen to induce emotional inconsistency can predetermine the effect the expression has on observers (Sinaceur et al., 2013). For example, the repercussions of expressed inconsistency between happiness and anger may be markedly different compared to expressing inconsistency between sadness and anger (see Hareli, David, & Hess, 2016 for an example of emotional inconsistency between sadness and anger). Whereas happiness and anger are approach-oriented emotions of opposite valences, in the case of sadness and anger, sadness is an avoidance-oriented emotion and both sadness and anger are of the same negative valence (e.g., Lench, Flores, & Bench, 2011). Research shows that apart from differences pertaining to valence and the approach or avoidance character of discrete emotions, emotional expressions also convey distinct social information to observers (e.g., happiness may signal good performance, anger sub standard performance, and sandess a solicitation for help; van Kleef et al., 2012), which in turn can differentially affect the thoughts, feelings, and behaviours of observers.

Investigating the impact of inconsistent emotional expressions within a leader-follower relationship appears to be a particularly interesting avenue of

research for several reasons. First, the notion of emotional consistency reflects the implicit assumption that constantly displaying discrete emotions such as happiness is beneficial and leads to a myriad of positive work-related outcomes (van Kleef et al., 2012). However, this assumption, which can be compared to the widely adopted emotional display rule "service with a smile" (Barger & Grandey, 2006, p.1229), excludes the possibility that leaders do not always feel happy, in which case displays of happiness are likely to lead to adverse effects for leaders themselves such as emotional exhaustion (Grandey, 2003). What is more, leader emotional displays that are not genuinely felt can be perceived as inauthentic by followers and can thus undermine the intended positive consequences of leader emotional labour (Gardner, Fischer, & Hunt, 2009; van Kleef et al., 2012). Furthermore, the conceptualisation of leader emotional consistency arguably does not sufficiently reflect the consensus in the affect literature that affective states and their expressions are transient and ever-changing (e.g., Beal et al., 2005), which is why research and theorising on emotional inconsistency builds on and complements previous work. Following from this, a conceptualisation of inconsistent emotional expressions involving two or more discrete emotions (Rothman & Melwani, 2016) may provide more discretion for the expresser to move between various emotional displays, which could alleviate the risk of adverse effects caused by emotional labour as well as related threats to perceived authenticity. For example, Frijda (1986) frames emotional inconsistency as the result of an individual intervening in the execution of one´s own regulatory processes. According to him, individuals who know how certain emotions are appraised can display emotions that do not necessarily present a reaction to environmental influences but a purposeful intervention in the way one is perceived by others. Finally, leader emotional inconsistency is likely to represent a more realistic approximation to how emotional leadership is enacted by acknowledging fluctuation and change between two or more discrete emotions over time (Rothman

& Melwani, 2016). Henceforth within this chapter, references to leader emotional expressions will encompass both consistent and inconsistent emotional expressions.

Leader emotional expressions can influence observers via two distinct pathways, an affective and a cognitive one, respectively (Keltner & Haidt, 1999; van Kleef et al., 2012; Weiss & Cropanzano, 1996). For example, interpersonal emotional expressions may lead to unconscious mimicry of observable indicators of said emotional displays (e.g., facial expressions, body movement, or tone of voice), which can in turn induce similar intrapersonal affective states in the observer (Hatfield, Cacioppo, & Rapson, 1992; Hatfield et al., 1993). Thus, a leader's emotional display can be *caught* by a follower in an affective process termed emotional contagion (Sy, Côté, & Saavedra, 2005). Furthermore, the resulting intrapersonal affective state can inform the follower's subsequent judgements, attitudes, and behaviours (i.e., affect infusion; Forgas, 1995). For example, if a follower catches a leader's expressed happiness and subsequently experiences positive feelings, this could lead this person to judge the immediate situation as cooperative in nature.

Additionally, observers can make cognitive inferences based on the perception of emotional expressions, which is encapsulated in the notion of affect-as information (Schwarz & Clore, 1983; van Kleef, 2009). More specifically, emotional expressions convey social information to observers with regards to how the expresser appraises and responds to things such as the interaction partner or the situation (van Knippenberg & van Kleef, 2016). In a leader-follower context, leader expressions of happiness or anger could signal to followers that their performance was above or substandard (van Kleef, Homan, et al., 2009). Follower's cognitive interpretations of leader emotional expressions can, in turn, influence their subsequent attitudes and behaviours (e.g., followers put more effort

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into their work as a result of the cognitive interpretation of substandard performance from leader displays of anger; van Kleef et al., 2012).

Beyond the consideration of two distinct pathways through which interpersonal emotional influence can be enacted, recently scholars started to criticise the simplistic notion that positive (negative) emotions are always supposed to yield positive (negative) outcomes as it is for example reflected in the positive psychology literature (Fredrickson, 2001; Lindebaum & Jordan, 2012). In order to challenge the dominant "symmetrical assumption" of how emotional expressions impact observers Lindebaum and Jordan (2014, p.1040) called for more research to shed light on when it can be good to express negative emotions and when it can be bad to express positive emotions (i.e., so-called asymmetrical relationships). The researchers point to the importance of a study's underlying context as one of the key considerations to make when investigating symmetrical vs. asymmetrical relationships (Lindebaum & Jordan, 2014). More specifically, factors such as personality (Chi & Ho, 2014; Van Kleef et al., 2010), the organisational context (Lindebaum & Fielden, 2010), or the nature of a work task (Lindebaum, Jordan, & Morris, 2016) can all be regarded as catalysts that could change the nature of relationships between leader emotional expressions and follower affective, cognitive, and behavioural reactions.

To summarise, the literature on state conceptualisations of leadership and affect revolves around the impact of interpersonal emotional expression that engender affective or cognitive reactions in observers. Thus, emotions displayed by leaders may lead to followers feeling the same emotions themselves (i.e., emotional contagion; Hatfield et al., 1993) or inferring some sort of performance feedback from emotional outbursts of their leader (i.e., via cognitive inferential processes; van Kleef, 2009). Furthermore, cognitive and affective processes underlying the relationship between leader emotional influence and follower work-

related outcomes are likely to be dependent on contextual factors that determine the symmetrical or asymmetrical nature of said relationships. Put differently, the environment in which leaders express emotions can influence how such expressions are received. For example, angry expressions are well-received in a military context (Lindebaum et al., 2016), but not in an environment that values social harmony (Van Kleef et al., 2010).

Apart from environmental factors, a leader's dispositional tendencies may also determine the frequency and intensity of experienced and expressed affect (van Knippenberg & van Kleef, 2016). In other words, the extent to which a leader generally experiences and expresses happiness, anger, or other emotions represents an important factor to consider when investigating emotional leadership (e.g., Joseph, Dhanani, Shen, McHugh, & McCord, 2015). Thus, the following section reviews evidence regarding various trait conceptualisations in the leadership and affect literature.

2.2.2 Trait Conceptualisations of Leadership and Affect

Beyond the theoretical stance of examining leader emotional expressions from an affective state perspective, for the sake of completeness I also provide a non-exhaustive overview of trait conceptualisations of leadership and affect. Specifically, I will explore the role of trait affectivity, empathy, as well as emotional intelligence in the leadership process (Rajah et al., 2011).

Leader trait affectivity can be defined as a stable, dispositional influence on leadership (Joseph, Dhanani, et al., 2015). Given that positive and negative affect are accepted as two unipolar dimensions (e.g., Watson, Clark, & Tellegen, 1988) leader positive affectivity would entail a tendency for leaders to experience elation, enthusiasm, or excitement, amongst other positive emotions, whereas leader negative affectivity would represent a predisposition to experience of fear, distress,

or hostility, amongst other negative emotions. Such dispositional affective tendencies can be interpreted as proxies for the enactment of leader emotional expressions. However, the investigation of leader affective traits has also been criticised as a somewhat imprecise research practice since the effects of leader affectivity are likely to covary with other, potentially unmeasured leader behaviours (van Knippenberg & van Kleef, 2016). In line with this criticism, leader trait affectivity has been related to various broader as well as more specific leadership dimensions such as leadership effectiveness, leadership emergence, as well as transformational and transactional leadership behaviours (Joseph, Dhanani, et al., 2015).

Empathy is often subdivided into a cognitive and emotional component (Davis, 1983). Cognitive empathy involves the imaginative understanding of another person's thoughts, feelings, and actions, whereas emotional empathy refers to actually feeling the emotion of another person whilst still maintaining a compassionate, other-focused perspective (Besel & Yuille, 2010). Thus, the explicit attitudinal perspective of still remaining compassionate and other-focused appears to be the main differentiator between emotional empathy and emotional contagion. In a leadership context, empathy has been proposed to be related to leadership emergence as well as problem-solving with regards to both relationship-oriented and task-oriented leadership (Kellett, Humphrey, & Sleeth, 2002, 2006). It has further been suggested that a high degree of empathy enables leaders to establish a connection with followers and better recognise their needs, which may ultimately help in developing a shared identity (Gooty, Connelly, Griffith, & Gupta, 2010).

Emotional intelligence (EI) is probably one of the most controversial research topics in the domain of organisational behaviour in recent decades (Côté, 2014). One reason for this is that there is a lack of definitional clarity when it comes to EI with two distinct definitions being available (Walter, Cole, & Humphrey, 2011).

On the one hand, there is an ability EI construct defined as "the ability to engage in sophisticated information processing about one's own and other's emotions and the ability to use this information as a guide to thinking and behaviour" (Mayer, Salovey, & Caruso, 2008, p.503). Some scholars have even argued that the ability to influence others via emotional displays should be included as an additional dimension in the ability EI construct (Côté & Hideg, 2011). On the other hand, a mixed or trait conceptualisation of EI is described as an array of dispositions, competencies, and perceptions related to effective management of emotions (e.g., self-awareness, empathy, positive mood, decision-making etc., Bar-On, 2000; Goleman, 2000). Generally, however, researchers agree that the ability conceptualisation of EI is the only one that is scientifically defensible (N.M. Ashkanasy & Daus, 2005; Côté, 2014; Joseph, Jin, Newman, & Boyle, 2015). Additionally, extraordinary claims with regards to the potency of EI have further contributed to scepticism with regards to the overall construct (Mayer et al., 2008). For example, it has been suggested that EI is the "sine qua non of leadership" (Goleman, 1998, p.93) and that EI explains up to 90% of the difference between star performers at work and average ones (Goleman, 2000). Beyond such claims, research points to a possible relationship between EI and transformational leadership (Harms & Credé, 2010) as well as between EI and leadership emergence (Côté, Lopes, Salovey, & Miners, 2010), however, results vary depending on which EI conceptualisation as well as measure is used, and studies often lack the inclusion of necessary control variables (e.g., cognitive ability and personality; Walter et al., 2011). The ambiguous theoretical foundation with regards to EI paired with a mixed evidence base has led some scholars to question whether leadership needs EI to begin with (Antonakis, Ashkanasy, & Dasborough, 2009).

In sum, the literature on trait conceptualisations of leadership and affect concerns affective predispositions and their utility within the leadership process. The constructs listed above can, in the best case, be described as proxies for effective emotional leadership, however, with the caveat that constructs such as trait affectivity or empathy still offer an imprecise measure of leader emotionality as they are one step removed from actual leader emotional expressions and their impact on observers (van Knippenberg & van Kleef, 2016). A more pessimistic perspective on leadership and affect research using trait conceptualisations would additionally emphasise that constructs such as trait affectivity or empathy exhibit substantial correlations with leadership styles such as transformational leadership, a concept, which in the past has equally been heavily criticised for a lack of both a clear conceptual definition and overarching theoretical framework, as well as insufficient validity of key measurement scales (van Knippenberg & Sitkin, 2013). As already mentioned above, the EI construct has been subject to similar criticism (Antonakis et al., 2009; Walter et al., 2011). Overall, it appears that the scientific investigation of phenomena around leadership and affect from a trait-based perspective invites a multitude of criticisms ranging from concerns regarding definitional clarity and measurement instrument validity to the questionable significance and explanatory power of proposed relationship between said trait constructs with certain leadership styles (e.g., transformational leadership; van Knippenberg & Sitkin, 2013). Therefore, the current thesis aims at pre-empting these concerns by investigating leadership and affect from an affective state perspective. By investigating leader emotional expressions as specific behaviours that leaders enact to exert social influence I avoid "lumping different aspects of leadership together" as it is currently done with regards to most leadership theories (van Knippenberg & Sitkin, 2013, p.45).

2.3 OVERVIEW OF THEORETICAL FRAMEWORKS ON LEADER EMOTIONAL EXPRESSIONS

The previous section highlighted that leader emotional expressions can elicit both affective and cognitive reactions in followers and that these processes are context-dependent (Lindebaum & Jordan, 2014; Sy et al., 2005; van Kleef, Homan, et al., 2009). This section aims at briefly summarising theoretical frameworks that were used to examine interrelationships within the leadership and affect literature. I excluded theories from this review that lacked the necessary breadth with regards to explaining observer reactions to a variety of discrete emotional expressions. For example, I excluded the Dual Threshold Model of Anger in Organisations by Geddes and Callister (2007) due to its exclusive focus on the discrete emotion of anger. With regards to each theory put forward I examined whether the scope of a certain framework can account for both proposed underlying mechanisms (i.e., affective and cognitive) as well as boundary conditions that are relevant when explaining the effects of leader emotional expressions on follower work-related outcomes.

First, the Dual Tuning perspective (George & Zhou, 2007; George, 2011) asserts that both positive and negative affective states are important antecedents for work-related outcomes such as work performance or creativity. The framework can explain the impact of both positive and negative emotions in the context of leader-follower dyads, as well as more complex feeling states such as emotional ambivalence (cf. Fong, 2006) on work-related outcomes (George, 2011). The dual tuning model, however, does not cover interpersonal emotional expressions that are inconsistent (i.e., expressions that alternate between two or more discrete emotions; Rothman & Melwani, 2016). Furthermore, the model represents an overemphasis on affective processes in dyadic relationships that involve leader displays of emotion and follower behavioural reactions. More specifically, the

framework does not cover cognitive processes with regards to interpersonal emotional displays but solely refers to cognitive underlying mechanisms when discussing intrapersonal moods (George, 2011). Moreover, the framework lacks theorising regarding the conditions (e.g., organisational culture, follower personality) under which affective reactions to leader emotionality may differentially impact follower work-related outcomes.

Second, Affective Events Theory (AET; Weiss & Cropanzano, 1996) focuses on the structure, causes, and consequences of affective experiences at work. AET suggests an event-based perspective where workplace events are described as the most relevant proximal causes for affective reactions that exert subsequent influence on attitudes and behaviours. With regards to behavioural outcomes, AET distinguishes between affect-driven as well as judgement-driven behaviours. Affective events directly relate to affect-driven behaviour, for example, in the case when positive mood influences helping behaviour (N. M. Ashkanasy & Humphrey, 2011). However, the relationship between affective events with judgement-driven behaviours is mediated by work attitudes such as organisational commitment (N. M. Ashkanasy & Humphrey, 2011). The framework contextualises affective events and their consequences, for example, personality dispositions, recurring affect cycles, and work environment characteristics are all proposed to impact affective reactions to work events (Weiss & Cropanzano, 1996). AET, however, does not explicitly cover the impact of leader displays of discrete emotions but would subsume it under the more generalised label of affective events. Framing leader emotionality as an affective event, however, would not sufficiently distinguish between work-related affective events that are incidental and due to chance or intentional and designed by a leader to exert social influence over a follower. Furthermore, the theory´s distinction between affective and cognitive underlying processes is limited. For example, according the tenets of AET work events invariably elicit affective reactions in individuals whereas empirical evidence

on the impact of leader emotional expressions did not always support these assertions (Van Kleef et al., 2010; Visser et al., 2013).

Finally, the Emotion as Social Information theory (EASI; van Kleef, 2009; van Knippenberg & van Kleef, 2016) states that emotional expressions influence the cognitions, attitudes, and behaviours of observers. EASI posits that interpersonal emotional influence can affect individuals through an affective and a cognitive pathway, respectively, termed affective reactions and inferential processes. The affective reactions pathway subsumes topics such as emotional contagion, the arousal of complementary emotions (e.g., sadness eliciting sympathy), or affect infusion (Forgas & George, 2001; Hatfield et al., 1993; Van Kleef et al., 2012). Via the inferential processes pathway, emotional expressions are proposed to provide observers with social information about the inner states of the expresser, his or her social intentions and orientation towards observers as well as the expresser's appraisal of the situation (Van Kleef et al., 2011). According to EASI theory, both pathways are subject to two sets of boundary conditions that determine which underlying mechanism takes relative precedence over the other in influencing organisational behaviour: factors influencing information processing depth as well as factors determining the perceived appropriateness of the situation, respectively. Van Kleef et al. (2011) argue that an observer's information processing depth depends on his or her motivation to process social information conveyed by emotional expressions, termed epistemic motivation. High epistemic motivation individuals are more likely to cognitively process emotional expressions as they engage in more deliberate and thorough information processing, whereas low epistemic motivation individuals are likely to affectively react to emotional expressions since they are less likely to deeply reflect on other people's emotions (van Kleef et al., 2012). Furthermore, the effects of emotional expressions are proposed to depend on whether they are regarded as appropriate in the given situation, for example emotional display rules informed by organisational culture or

certain personality characteristics of observers may prescribe what is acceptable in this regard (Van Kleef, 2009). In case an emotional expression is perceived as inappropriate, observer negative affective reactions are more likely to ensue than deliberate and thorough reflections on what may have caused said emotional display (van Kleef et al., 2012).

Generally, the theories described in this section provide useful frameworks for the investigation of leader emotional expressions on follower work-related outcomes. However, many of them have shortcomings as well with regards to the scope of explanation they permit. Considering this, I decided to use EASI theory (van Kleef, 2009) as the guiding framework for this thesis for several reasons. EASI theory specifically describes mechanisms that relate leader interpersonal emotional expressions to follower outcomes such as work performance or creativity (van Kleef et al., 2010; van Kleef, Homan, et al., 2009). In this respect, the framework offers more specificity than the Dual Tuning approach (George, 2011) that predominantly describes processes pertaining to intrapersonal moods or AET (Weiss & Cropanzano, 1996) that would subsume leader emotional expressions under affective events in general. Furthermore, despite the fact that EASI theory does not explicitly describe how inconsistent emotional expressions exert social influence van Kleef and colleagues (2012) did call for future research to examine the role of expressing changing emotional expressions on work outcomes of those who observe them. Moreover, EASI theory acknowledges and clearly distinguishes between affective and cognitive underlying mechanisms that connect leader emotional expressions with follower outcomes and does so with greater specificity than the other theoretical frameworks described above. Lastly, considering the interplay of both affective and cognitive processes, EASI theory is the only framework proposing boundary conditions that influence the relative precedence of either affective or cognitive processes in determining follower behaviour.

2.4 PROPOSED KEY OUTCOMES OF LEADER DISPLAYS OF EMOTIONS

Having examined different state and trait conceptualisations within the leadership and affect literature along with a critical examination of theoretical frameworks suitable for the examination of leader emotional influence, a clearer picture emerges. Leaders can use emotional displays as a potent means to the end of exerting social influence towards followers. Said leader attempts at emotional influence are predominantly affectively or cognitively processed by followers, contingent on various factors related to follower's information processing depth or the perceived appropriateness of leader emotional expressions in a given situation (van Kleef, 2009).

Concerning key outcomes or consequences of leader emotional expressions, EASI theory (Van Kleef et al., 2011) remains broad in its predictions. Accordingly, leader emotional expressions influence feelings, cognitions, attitudes, and behaviours of followers (van Kleef et al., 2012; van Kleef, 2009). Specifically with the leadership and affect literature in mind, van Knippenberg and van Kleef (2016) expand on this proposition to specify that within a leader-follower relationship leader emotional influence on follower attitudes and behaviours is best conceptualised in terms of leadership effectiveness. Importantly, leadership effectiveness here is understood predominantly in behavioural terms indicating a potential impact of leader emotional expressions on follower work-related outcomes such as in- and extra-role performance or creativity (Kaiser, Hogan, & Craig, 2008; van Knippenberg & van Kleef, 2016). Furthermore, the aforementioned behavioural indicators (e.g., follower in-role performance or creativity) as a measure for the impact of leader emotionality are considered to provide stronger evidence for leadership effectiveness than measures of follower attitudes or leadership evaluations, which are seen as proximal outcomes or potential correlates of eventual behavioural outcomes (van Knippenberg & van

Kleef, 2016). The differentiation between behavioural and attitudinal indicators of leadership effectiveness is grounded in the fact that follower job attitudes and leadership evaluations are influenceable by subjective perceptions of leadership effectiveness that may or may not overlap with more objective assessments (Lord & Maher, 1991; van Knippenberg & van Kleef, 2016).

In sum, based on EASI theory (van Kleef, 2009) and its extensions within a leadership context (van Knippenberg & van Kleef, 2016) I conclude that the proposed key outcome of leader influence enacted by means of emotional displays is leadership effectiveness. Moreover, in this respect a distinction can be made between behavioural (e.g., follower in-role performance) as well as attitudinal (e.g., follower job statisfaction) indicators of leadership effectiveness, the former providing stronger evidence, and the latter weaker evidence for the impact of leader emotional expressions on followers (van Knippenberg & van Kleef, 2016).

2.5 UNDERLYING MECHANISMS AND BOUNDARY CONDITIONS

As previously discussed, the literature on leadership and affect broadly distinguishes between two proposed underlying mechanisms (i.e., affective and cognitive processes) to explain the relationship between leader displays of discrete emotions and follower work-related outcomes (Elfenbein, 2007; van Kleef et al., 2012; van Knippenberg & van Kleef, 2016). These effects have been proposed to be contingent on contextual factors (Lindebaum & Jordan, 2012, 2014). According to EASI theory, the main contextual factors that lead to a differential impact of leader emotional expressions on follower work-related outcomes can be grouped into the following two categories.

First, a follower's ability to process information can affect the degree to which the respective individual engages in deep (versus surface-level) information processing to cognitively interpret an emotional expression displayed by a leader (van Kleef, 2009). Said ability is captured in the construct epistemic motivation and

is partly rooted in various personality traits (Kruglanski & Webster, 1996). For example, a higher need for cognition, a lower need for cognitive closure and personal structure, as well as a higher openness to experience has been proposed to reflect high epistemic motivation and therefore a predisposition to cognitively interpret emotional expressions (van Kleef et al., 2012).

Second, social-contextual factors contributing to follower perceptions as to which emotional expression is deemed appropriate or inappropriate represent a further contingency that influences whether leader displays of emotion induce an affective reaction or a cognitive interpretation, respectively (Van Kleef et al., 2011). Examples of such social-contextual factors include national and / or organisational culture and related emotional displays rules (e.g., service with a smile; Rafaeli & Sutton, 1987). The intensity with which an emotion is displayed can further influence appropriateness perceptions. For example, highly intense displays of anger are very likely to be perceived as inappropriate in most work contexts (Geddes & Callister, 2007). Furthermore, emotional expressions that are perceived to be inauthentic may backfire as they are often perceived as dishonest, even unethical and manipulative, which is likely to evoke negative affective reactions in observers (van Kleef et al., 2012). Finally, the perceived appropriateness of emotional expressions may also be contingent on the personality makeup of followers. For example, leader expressions of anger are likely to be considered as inappropriate by followers high in agreeableness, as those individuals highly value social harmony, which in turn would be breached by expressions of anger (Van Kleef et al., 2010).

A recent extension of EASI theory specifically tailored to explain emotional expressions within a leader-follower context (i.e., the contagion-interpretation model; van Knippenberg & van Kleef, 2016) adds to the moderated mediation model put forward by van Kleef and colleagues (e.g., 2012) by making the following contributions that go beyond the original propositions of EASI theory. First, the

contagion-interpretation model (CIM) further extends the contingency perspective of EASI by proposing additional contextual factors, which the model summarises from a perspective of a match or mismatch between different variables. For example, the CIM proposes that, compared to a mismatch, a match between leader emotional expressions and other elements of leadership (e.g., feedback valence or leader appeals) results in greater leadership effectiveness (Newcombe & Ashkanasy, 2002; van Knippenberg & van Kleef, 2016; Venus et al., 2013). Second, compared to a mismatch, a match between leader emotional expressions and follower trait affect is proposed to result in increased leadership effectiveness (Damen, van Knippenberg, & van Knippenberg, 2008). The CIM's propositions describing a match or mismatch situation could be interpreted as a line of argumentation to the end of exploring the effects of consistency versus inconsistency between various leader and follower variables. This thesis builds on this notion by exploring the effects of inconsistency between two discrete leader emotional expressions. Leader gender is also proposed by the CIM as an additional moderating variable (e.g., Lewis, 2000), which becomes increasingly relevant considering the substantial evidence base regarding gender stereotypes of emotions (Brescoll, 2016). Additional contextual variables particularly with regards to emotional contagion processes include individual differences in follower susceptibility to contagion (S. K. Johnson, 2008), the nature of the work task (Visser et al., 2013), as well as a consideration of differential effects when comparing the impact of different discrete emotions with each other e.g., displays of anger versus sadness when delivering failure feedback (Madera & Smith, 2009) or displays of other-focused emotions (e.g., gratitude) versus self-focused emotions (e.g., pride; Eberly & Fong, 2013).

Second, with regards to contextual factors the CIM states the need to clearly emphasise whether a moderation is understood as first- (i.e., moderating variables influencing the impact of leader emotional expressions on the mediating

path) or second-stage moderation (i.e., moderating variables influencing the impact of the mediating process on the outcome), or both (van Knippenberg & van Kleef, 2016). As already proposed by EASI theory, a first-stage moderation is important to consider because both affective and cognitive reactions to leader emotional expressions are contingent on individual differences and subject to situational characteristics (van Kleef et al., 2012). The CIM additionally proposes the relevance to investigate second-stage moderation effects as the "downstream consequences of emotional contagion or cognitive interpretation" can equally be affected by individual differences of observers or characteristics of the situation in which leaders display emotions (van Knippenberg & van Kleef, 2016, p.719).

2.6 EMPIRICAL EVIDENCE FOR THE IMPACT OF LEADER EMOTIONAL EXPRESSIONS

Since there is a paucity of research on the impact of inconsistent emotional expressions within a leadership context, this review will present empirical evidence of the relationship between consistent leader emotional expressions and leadership effectiveness (i.e., follower affective, attitudinal, and behavioural reactions to leader emotional influence; van Knippenberg & van Kleef, 2016). Due to the fact that there is very little theorising pertaining to the multilevel nature of the relationship between leader emotions and leadership effectiveness (see Ashkanasy & Jordan, 2008 for an exception), the present review will not explicitly distinguish between the impact of leader emotions on multiple levels of analysis (e.g., between the individual and group level). The following section is structured according to main effect evidence, followed by indirect effects, and finally showcasing boundary conditions of the respective relationships. Summarising empirical evidence regarding main effects, indirect effects, and boundary conditions complements the aforementioned theoretical predictions to the end of informing the research model developed by this thesis.

2.6.1 Main Effects on Follower Affect

Evidence of main effects in the literature on leader emotional expressions and leadership effectiveness initially revolved around the concept of emotional contagion (Hatfield et al., 1993). Research generally shows that leader displays of positive emotions lead to follower positive emotions as well as related behavioural consequences, for example smiling (Cherulnik, Donley, Wiewel, & Miller, 2001; Eberly & Fong, 2013; Erez et al., 2008; S. K. Johnson, 2008, 2009; Sy et al., 2005; Visser et al., 2013). This contagion effect appears to hold for both individual as well as group level positive affect (Seong & Choi, 2014; Sy et al., 2005). Empirical evidence with regards to leader display of negative emotions (LDNE), however, paints a more inconsistent picture. Sy et al. (2005) found that LDNE are related to individual negative emotions as well as negative group affective tone (i.e., via emotional contagion). Similarly, Johnson (2009) as well as Madera and Smith (2009) reported positive relationships between LDNE and follower negative affect. On the other hand, Erez et al. (2008), as well as Visser et al. (2013) were not able to replicate these findings.

Research also shows that leader emotional displays can elicit complementary emotions in followers (Keltner & Haidt, 1999). In regard to this, Lewis (2000) found that sad emotional displays led to increased fatigue (or negative arousal) and lower enthusiasm (or positive arousal) in followers. Displays of anger in turn led to higher nervousness (negative activation) as well as lower relaxation (low activation; Lewis, 2000).

Generally, available empirical evidence supports the notion that emotional contagion is prevalent in leader-follower relationships. Leaders can exert emotional influence towards their followers and change the affective states they experience. The following section reviews main effect evidence pertaining to follower work-related behaviour.

2.6.2 Main effects on Work-Related Behaviour

Research on leader emotional displays as a means of influencing relevant work-related behaviour in followers mainly focused on in-role, extra-role (i.e., organisational citizenship behaviour), and creative performance.

Gaddis et al. (2004) found that leader displays of positive emotion in a failure feedback situation increased subsequent follower performance compared to negative emotional displays. Similarly, Johnson (2009) reported that leaders expressing positive mood elicit better follower performance when compared to others displaying negative emotional expressions. These results describe the impact of more general affective states (e.g., leader mood) on task performance. However, when looking at evidence pertaining to discrete emotions, Visser et al. (2013) found that leader display of sadness enhanced follower analytical performance. At the group level, George (1995) reports a positive relationship between leader positive mood and group performance. Furthermore, Sy et al. (2005) found that groups with leaders in a positive mood exhibited better group coordination, whereas leader negative mood was related to increased group effort, both of which are outcomes that can be viewed as determinants of group performance. However, other studies failed to establish a direct effect between leader emotional displays and work performance, both on the individual (Damen, van Knippenberg, & van Knippenberg, 2008; Van Kleef, Homan, Beersma, & van Knippenberg, 2010; van Kleef et al., 2009; Venus, Stam, & van Knippenberg, 2013) and group level (Seong & Choi, 2014).

Focusing on extra-role performance, Koning and van Kleef (2015) showed that leader displays of anger (compared to displays of happiness) decrease follower willingness to engage in organisational citizenship behaviours. Investigating group-level relationships, George and Bettenhausen (1990) found that leader displays of positive emotions are positively related to group prosocial

behaviour, defined as behaviour that is beneficial to the person, group, or organisation at which they are directed.

Recently, researchers additionally aimed to shed light on the relationship between leader displays of discrete emotions and creativity. Visser et al. (2013) found leader displays of happiness to be positively related to creative performance. On the other hand, van Kleef et al. (2010) failed to establish a direct relationship between leader displays of anger and follower creativity.

Empirical evidence concerning the relationship between leader emotional expressions and follower work-related behaviour is mixed. Whilst some studies identify positive (negative) relationships between positively (negatively) valenced leader emotional expressions and follower work-related behaviours, others fail to establish this direct link. This points towards the need for more research on underlying mechanisms as well as boundary conditions that could play a role in this respect. I will review available empirical evidence regarding indirect effects as well as boundary conditions in subsequent sections.

2.6.3 Main Effects on Follower Attitudes

Another fruitful area of research revolves around the impact of leader emotional displays on follower attitudes with a focus on follower evaluations of leadership effectiveness, satisfaction with the leader, leader-member exchange (LMX) quality, and trust amongst others.

With regards to perceived leadership effectiveness, Lewis (2000) reported that a leader displaying neutral facial expressions is rated as more effective than his counterparts displaying anger or sadness. Extending this research, Gaddis et al. (2004) showed that leaders who display positive affect in a failure feedback situation are viewed as more effective by followers than leaders displaying negative affect. Bono and Ilies (2006) as well as Eberly and Fong (2013) were able to replicate this finding for non-failure feedback situations.

Glomb and Hulin (1997) showed that leader displays of anger are negatively related to follower ratings of satisfaction with the leader. Schaubroeck and Shao (2012) replicated these findings by showing that the frequency of leader displays of anger negatively affect follower satisfaction with the leader. Additionally, they showed that leader displays of sadness positively affect satisfaction with the leader, indicating that different discrete emotions of the same valence (e.g., anger and sadness) can have differential consequences for follower attitude formation. On the other hand, Connelly and Ruark (2010) failed to show a significant relationship between leader displays of positive or negative emotions and follower satisfaction with the leader.

Leader emotional displays have also been investigated in relation to leader attractiveness and likability. Here, Bono and Ilies (2006) reported evidence suggesting a link between leader positive emotional displays and follower ratings of leader attraction. In a similar vein, Schaubroeck and Shao (2012) investigated the impact of discrete negative affect (i.e., anger and sadness) on leader likability. Their results showed a negative relationship between leader displays of anger and follower evaluations of leader likability, as well as a positive relationship between leader displays of sadness and leader likability ratings.

Recently, researchers started to look at the relationship between leader emotional displays and follower perceptions of leader characteristics such as competence or legitimacy. In line with this, Madera and Smith (2009) reported that followers rate their leaders as more competent and regard them as more legitimate when they display sadness or both anger and sadness simultaneously in response to a company crisis where they had to recall faulty products. They further showed that displaying sadness or both anger and sadness simultaneously leads to more favourable leader evaluations by followers compared to leaders solely displaying anger in said situation. In a similar vein, Schaubroeck and Shao (2012) showed that leader displays of anger are negatively related to follower evaluations of leader

competence. Leader displays of sadness, however, were shown to be positively related to follower perceptions of leader competence.

In an attempt to shed light on the link between leader emotional displays and the quality of leader-member exchange relationships (i.e., LMX quality), Newcombe and Ashkanasy (2002) found that leader positive emotional displays increase follower perceptions of LMX quality. Investigating the impact of discrete negative emotional expressions (i.e., anger and sadness) on LMX quality, Schaubroeck and Shao (2012) reported a negative relationship between leader displays of anger and LMX quality, whereas leader displays of sadness increased follower perceptions of LMX quality.

The evidence base concerning the relationship between leader emotional expressions and follower attitudes paints a relatively clear picture. Emotional displays by leaders can influence follower perceptions of the leader's likability, as well as the relationship quality or satisfaction they experience with their leader. However, research evidence pertaining to follower satisfaction with the leader was mixed at times since Connelly and Ruark (2010) were unable to replicate the previously reported main effect.

2.6.4 Indirect Effects on Work-Related Behaviour

Apart from main effect evidence, research consistently showed indirect effects between leader emotional displays and in-role, extra-role, and creative performance. In line with this, several studies report follower affect to mediate the relationship between leader emotional displays and in-role performance (i.e., an examination of emotional contagion as underlying mechanism). Johnson (2009) reported that follower negative affect partially mediated the relationship between leader negative emotional display and follower performance. Although hypothesised, Johnson (2009) was not able to detect an indirect effect of leader positive emotional displays on follower performance via follower positive affect. In a

similar vein, counter to their hypothesis Visser and colleagues (2013) did not find an indirect effect between leader displays of sadness and analytical performance via follower negative affect. With regards to group-level performance outcomes Seong and Choi (2014) showed that the relationship between leader positive affect and group performance is mediated by group positive affect, group level goal fit, as well as relationship and task conflict. Furthermore, Sy et al. (2005) found that positive group affective tone fully mediated the relationship between leader positive mood and group coordination. Moreover, negative group affective tone was shown to partially mediate the relationship between leader negative mood and group coordination. Apart from this, van Kleef and colleagues (2010) found that the interactive effect between leader anger and team agreeableness on performance was mediated by experienced workload. This implies that the display of leader anger has a negative performance-related impact on agreeable followers through higher experienced workload. Moreover, Venus et al. (2013) found relative promotion strength to mediate the relationship between leader emotional displays and follower performance. More specifically, leader displays of enthusiasm increased follower performance via employee promotion focus (or high relative promotion strength). Similarly, the effect of leader displays of agitation was positively related to follower performance mediated by employee prevention focus (or low relative promotion strength). Finally, van Kleef et al. (2009) showed that the relationship between leader emotional displays (i.e., happiness and anger, respectively) and team performance was mediated by both performance inferences as well as affective reactions contingent on follower levels of epistemic motivation.

In regard to creative performance, Visser et al. (2013) showed that the relationship between leader displays of happiness and follower levels of creative performance is mediated by follower positive affect. Furthermore, van Kleef et al. (2010) reported that task engagement fully mediates the relationship between

leader displays of anger and follower creative performance contingent on follower levels of epistemic motivation.

A review of previous research on indirect effects between leader emotional expressions and follower work behaviours does not allow for a clear conclusion. Whilst some studies establish indirect effects between positive and negative leader emotions and follower work behaviours via follower emotional contagion (e.g., Sy et al., 2005), other studies fail to replicate the proposed mediation effect (e.g., Johnson, 2009; Visser et al., 2013). This may indicate that an indirect effect between leader emotional expressions and follower work behaviours via a mediating process such as emotional contagion depends on another variable that moderates these interrelationships. I will review empirical evidence regarding moderating variables in subsequent sections.

2.6.5 Indirect Effects on Follower Attitudes

Several researchers suggested underlying mechanisms to explain the relationship between leader emotional displays and follower attitudes. Research by Eberly and Fong (2013) shows that follower positive mood mediates the relationship between leader positive emotional displays and follower perceptions of leadership effectiveness. Despite the fact that no formal test for mediation was conducted, Bono and Ilies (2006) reported independent main effects for both leader positive emotional displays and follower positive mood on ratings of perceived leadership effectiveness. Moreover, a positive association between leader positive emotional displays and follower positive mood was reported suggesting a possible indirect effect of leader positive emotional displays on perceived leadership effectiveness via follower positive mood.

Shedding light on the underlying mechanism between leader emotional displays and follower satisfaction with the leader, Schaubroeck and Shao (2012) found that leader prototype fit (i.e., whether or not a manager is perceived as

leader-like) mediated the relationship between the leader dispositional anger and follower satisfaction with the leader contingent on leader gender. More specifically, male leaders were judged less negatively compared to their female counterparts in terms of follower satisfaction when their displayed anger was attributed to their personality. Thus, anger as an agentic expression seems to be closer to prototypically male leader behaviour, which is why women are judged more harshly when displaying such emotions. Schaubroeck and Shao (2012) showed the same indirect effect with regards to perceived leader likability as an additional attitudinal outcome variable.

With regards to indirect relationships between leader emotional displays and follower perceptions of competence and legitimacy, Madera and Smith (2009) found this relationship to be mediated by follower affect. Specifically, leader expressions of anger led to increases in follower negative affect compared leader expressions of sadness or both anger and sadness simultaneously. Follower negative affect, in turn, was negatively related to perceived leader competence and legitimacy. Moreover, Schaubroeck and Shao (2012) reported a stronger negative relationship between female (compared to male) leader's dispositional anger and perceived leader competence mediated by leader prototype fit (i.e., follower perceptions of their manager as leader-like). Thus, if leader emotional displays do not conform to what is deemed as prototypical for a female leader (e.g., if a woman displays anger), follower ratings of perceived competence will decrease.

The same is true for the relationship between leader emotional displays and perceived leader member exchange (LMX) quality. Schaubroeck and Shao (2012) reported a stronger negative relationship between female (compared to male) leader's dispositional anger and perceived LMX quality mediated by leader prototype fit. Thus, followers of a female leader (as opposed to a male leader) displaying anger will report lower perceived LMX quality, which is explained by their perceptions of such leaders as being less leader-like.

So far, available research evidence supports the notion that both affective (e.g., emotional contagion; Madera & Smith, 2009) and cognitive (e.g., leader prototype fit; Schaubroeck & Shao, 2012) processes act as underlying mechanisms to explain the effect of leader emotional expressions on follower attitudes.

2.6.6 Boundary Conditions for the Leader Emotion – Follower Affect Relationship

Research on emotional contagion revealed that the gender fit between leaders and followers may determine the strength of such affective reactions. Specifically, Cherulnik et al. (2001) showed that emotional contagion between leader and follower is stronger for opposite gender combinations (e.g., male leaders and female followers and vice versa).

Johnson (2008) examined follower susceptibility to emotional contagion as a boundary condition of the relationship between leader affect, follower affect and follower organisational citizenship behaviour (OCB). Her results show that follower susceptibility to emotional contagion moderates the relationship between leader positive affective displays and follower positive affect (i.e., a first-stage moderation). Thus, followers that are highly susceptible to emotional contagion will exhibit stronger affective reactions to leader displays of positive affect. The same interaction effect, however, could not be detected for leader negative affective displays on follower negative affect.

To date, empirical evidence on boundary conditions in the relationship between leader emotional expressions and follower affect is limited and warrants further scientific investigation.

2.6.7 Boundary Conditions for the Leader Emotion – Work-Related Behaviour Relationship

Various boundary conditions have been identified for the relationship between leader emotional displays follower work-related behaviours.

Several studies identified personality traits as moderators of the relationship between leader emotional displays and follower performance-related outcomes. Van Kleef and colleagues (van Kleef et al., 2010; van Kleef et al., 2009) propose epistemic motivation (i.e., the motivation to thoroughly process social information conveyed by emotions) to moderate the relationship between leader emotional displays and both in-role and creative performance. Specifically, van Kleef et al. (2009) found that leader displays of anger lead to increased team performance when followers scored high on epistemic motivation whereas leader displays of happiness increase team performance for followers with low levels of epistemic motivation. Van Kleef and colleagues (2010) report similar results with regards to creative performance. Here, leader displays of anger enhanced (diminished) follower´s creative performance when they scored high (low) on epistemic motivation. Another study by van Kleef et al. (2010) shows that the personality trait agreeableness moderates the relationship between leader displays of anger and team performance, in that leader displays of anger increased (decreased) team performance for followers with low (high) levels of agreeableness. Conversely, Chi and Ho (2014) found that for highly agreeable and conscientious followers leader negative emotional displays (LNED) increases in-role performance compared to their less agreeable and conscientious counterparts.

Visser et al. (2013) introduced task type as another boundary condition. Their research shows that leader displays of happiness and sadness increase follower performance moderated by the type of the task (e.g., creative vs. analytical). Thus, leader displays of happiness increase follower performance at

creative tasks, whereas leader displays of sadness lead to improvements in follower performance on analytical tasks.

Damen and colleagues (2008) show that an affective match between leaders and followers increases follower performance. More specifically, leader displays of positive emotions increase follower performance for followers with high levels of positive affect (i.e., an affective match).

Research conducted by Venus et al. (2013) focused on the role of leader emotional displays in the context of visionary communication. They showed that the end states that leaders communicate (e.g., promotion vs. prevention focused visions, values, and goals) moderate the indirect effect of leader emotional displays (happiness vs. agitation) on task performance via follower regulatory foci (promotion vs. prevention focus). Follower performance was highest in case of a match between leader emotion (enthusiasm vs. agitation) and communicated end state in terms of implied regulatory focus (i.e., promotion vs. prevention focus of visions, values, and goals).

Investigating extra-role performance, Koning and van Kleef (2015) showed that the negative relationship between leader displays of anger (compared to displays of happiness) and follower willingness to engage in organisational citizenship behaviours is pronounced in case such displays of anger are perceived as inappropriate.

Empirical evidence on boundary conditions suggests various contingency factors to influence the impact of leader emotional expressions on follower work behaviours. For example, follower individual differences (e.g., van Kleef, Homan, et al., 2009), the type of a work task (e.g., Visser et al., 2013), or whether emotional expressions are perceived as appropriate by followers (Koning & Van Kleef, 2015) can all influence the emotional leadership process.

2.6.8 Boundary Conditions for the Leader Emotion – Follower Attitudes Relationship

Previous research further identified boundary conditions for relationships between leader emotional displays and follower attitudes at work.

Looking at the relationship between leader emotional expressions and follower perceptions of leadership effectiveness, Lewis (2000) found that leader gender moderates this relationship. A leader displaying non-gender endorsed emotions was rated down with regards to perceived leadership effectiveness by his or her followers (e.g., female leaders displaying anger or sadness and male leaders displaying sadness).

Gaddis et al. (2004) investigated the moderating effect of goal type (promotion vs. prevention) on the relationship between leader negative affect and follower perceptions of leadership effectiveness in a failure feedback context. Their findings indicate that leader negative affective displays during a failure feedback situation lead to an increase in perceived leadership effectiveness when prevention goals are activated. However, results did not support the hypothesis that leader positive affective displays increase perceived leadership effectiveness when promotion goals are activated.

Eberly and Fong (2013) provided evidence for the moderating effect of follower interdependence on the indirect effect between leader emotional displays and perceived leadership effectiveness via both follower emotions and perceived intentionality attributions. They found that leader positive affective displays led to an increase in follower positive affect, intentionality attributions, and subsequent perceived leadership effectiveness. With regards to both mediating variables, the indirect effect was strongest for high levels of follower interdependence.

Turning to follower satisfaction with the leader, Schaubroeck and Shao (2012) found that leader gender moderated the indirect effect of leader

dispositional sadness on follower satisfaction with the leader via leader prototype fit. Thus, female leaders (compared to their male counterparts) are rated down in terms of satisfaction in case their displays of sadness are attributed to their personality because followers perceive this to be less leader-like. Similar results were reported when focusing on leader likability. Schaubroeck and Shao (2012) found that when female (compared to male) leaders display sadness, they are rated as less likable if followers make a dispositional attribution about their sadness displays.

Madera and Smith (2009) found evidence that accepting responsibility in a crisis situation moderated the effect of leader emotional displays on perceived leader competence and legitimacy. Their results showed that leader displays of anger and sadness had less of a negative influence on follower evaluations of competence and legitimacy when the leader accepted responsibility in a crisis compared to when he or she did not.

Investigating the effect of leader emotional displays on LMX quality, Newcombe and Ashkanasy (2002) identified feedback congruence as a boundary condition. The researchers describe feedback congruence as a situation in which a leader gives a follower positive verbal feedback whilst displaying positive affect. The results show that congruence between leader displays of positive affect along with positive verbal feedback leads to the increases in follower ratings of LMX quality. Schaubroeck and Shao (2012) showed that gender moderated the indirect effect of leader dispositional anger on perceived LMX quality via leader prototype fit. Thus, if followers attributed leader displays of anger to their personality, followers of female leaders (compared to male leaders) indicated lower perceived LMX quality due to perceptions of female leaders to be less leader-like.

To summarise, research suggests that the impact of leader emotional expressions on follower attitudes depends on a variety of factors, including leader

gender (e.g., Lewis, 2000), goal type (Gaddis et al., 2004), or follower

interdependence (Eberly & Fong, 2013).

Table 2.2 summarises the key outcomes, underlying mechanisms, as well

as boundary conditions that are discussed within the literature of leadership and

affect with a focus on consistent leader emotional expressions. For each theoretical

claim I provide the empirical evidence that is available to date.

TABLE 2.2
Overview of the Empirical Evidence for Outcomes, Mediators, and
Moderators of Leader Emotional Expressions

Domain	Level of analysis	Variable	Empirical evidence
Outcome	Individual	Positive and negative affect	Cherulnik et al. (2001); Eberly & Fong (2013); Erez et al. (2008); Johnson 2008,2009; Sy et al. (2005); Visser et al. (2013); Madera & Smith (2009); Lewis (2000)
	Individual	In-role performance	Gaddis et al. (2004); Johnson (2009); Visser et al. (2013)
	Group	In-role performance	George (1995); Sy et al. (2005)
	Individual	Extra-role performance	Koning & van Kleef (2015)
	Group	Extra-role performance	George & Bettenhausen (1990)
	Individual	Creative performance	Visser et al. (2013); van Kleef et al. (2010)
	Individual	Perceived leadership effectivness	Lewis (2000); Gaddis et al. (2004); Bono & Ilies (2006); Eberly & Fong (2013)
	Individual	Satisfaction with the leader	Glomb & Hulin (1997); Schaubroek & Shao (2012)
	Individual	Leader attractiveness / likability	Bono & Ilies (2006); Schaubroek & Shao (2012)
	Individual	Perceived leader competence	Madera & Smith (2009); Schaubroek & Shao (2012)
	Individual	LMX quality	Newcombe & Ashkanasy (2002); Schaubroek & Shao (2012)

TABLE 2.2 (continued)

Domain	Level of analysis	Variable	Empirical evidence
Mediator	Individual	Emotional contagion (positive and negative)	Bono & Ilies (2006); Eberly & Fong (2013); Johnson 2009; Sy et al. (2005); Visser et al. (2013); Madera & Smith (2009); Seong & Choi (2014)
	Individual	Leader prototype fit	Schaubroek & Shao (2012)
	Individual	Regulatory focus	Venus et al. (2013)
	Individual	Task engagement	van Kleef et al. (2010)
	Group	Experienced workload	van Kleef et al. (2010)
	Group	Affective reactions and performance inferences	van Kleef et al. (2009)
Moderator	Individual	Gender fit between leaders and followers	Cherulnik et al. (2001)
	Individual	Gender	Lewis (2000); Schaubroek & Shao (2012)
	Individual	Susceptibility to emotional contagion	Johnson (2008)
	Individual / Group	Epistemic motivation	van Kleef et al. (2009); van Kleef et al. (2010)
	Individual / Group	Follower Agreeableness	van Kleef et al. (2010); Chi and Ho (2014)
	Individual	Task type	Visser et al. (2013)
	Individual	Affective match	Damen et al. (2008)
	Individual	Type of vision, values, or goals	Venus et al. (2013); Gaddis et al. (2004)
	Individual	Perceived appropriateness of emotional expression	Koning & van Kleef (2015)
	Individual	Follower interdependence	Eberly & Fong (2013)
	Individual	Leader acceptance of responsibility	Madera & Smith (2009)
	Individual	Feedback congruence	Newcombe & Ashkanasy (2002)

2.6.9 Summary of Empirical Findings

This chapter provided a review of the literature on leadership and affect including a summary of the evidence base to date on leader emotional expressions and leadership effectiveness (i.e., follower affective, attitudinal, and behavioural reactions to leader emotional influence; van Knippenberg & van Kleef, 2016).

The evidence base summarised above shows that the proposed effects of leader displays of consistent emotional expressions on most outcomes is supported by several studies including underlying mechanisms and boundary conditions. That being said, there is a complete absence of empirical evidence regarding the effects of displaying inconsistent emotional expressions in a leadership context (e.g., Rothman & Melwani, 2016). Therefore, I set out to address this shortcoming and investigate the impact inconsistent emotional expressions have in a leader-follower relationship including an examination of underlying mechanisms and boundary conditions. More specifically, I will examine the role of inconsistent leader emotions in sparking follower creative performance for two reasons. Generally, creative performance has been shown to be affect-driven and is therefore likely to be susceptible to interpersonal emotional influence (Baas et al., 2008; van Kleef et al., 2010; Visser et al., 2013). Furthermore, past research showed that complex affective states (e.g., emotional ambivalence) particularly increase creative performance, which points towards the possibility that inconsistent emotional expressions may be a potent means in this respect (Fong, 2006; Rothman & Melwani, 2016).

CHAPTER 3:

OVERVIEW OF THE CREATIVIVE PERFORMANCE LITERATURE

3.1 CHAPTER SUMMARY AND SCOPE OF THE REVIEW

This chapter reviews the literature on creative performance with an emphasis on the determinants (i.e., leadership, affect and cognition, as well as factors related to information processing and perceived inappropriateness of emotions) relevant for the current investigation. The chapter opens with a definition of creative performance followed by an overview of relevant theoretical frameworks that formed the basis of most investigations in this research area. Informed by the tenets of EASI theory (van Kleef, 2009), I review empirical evidence pertaining to leadership, affective and cognitive processes, as well as factors related to information processing depth and the perceived appropriateness of emotions as antecedents of creative performance at work. The present chapter adds to the literature review on leadership and affect presented in Chapter 2 by examining interrelationships between study variables from the perspective of both the independent (i.e., leader emotional expressions) and dependent (i.e., creative performance) variable of this thesis.

3.2 DEFINITION OF CREATIVE PERFORMANCE AND OVERVIEW OF THEORETICAL FRAMEWORKS

3.2.1 Defining Creative Performance

Creative performance at work is defined as a process outcome (e.g., a product or idea) that is both novel and useful (Amabile, 1983, 1996). Novelty involves either a significant recombination of existing perspectives or an introduction of a completely new perspective on work-related issues, whereas the usefulness of a process outcome is given if it has relevance to an organisation (Oldham & Cummings, 1996). Creativity and its definition is often contrasted with

innovation, defined as the implementation of novel and useful ideas in practice (West & Farr, 1990). As creativity emphasises idea generation and innovation the implementation of said ideas, creativity is often conceptualised as a first step in the innovation process (Amabile, 1996; West, 2002).

3.2.2 Overview of Theoretical Frameworks in the Creative Performance Literature

This section sets out to briefly summarise theoretical frameworks that were used to examine interrelationships within the creative performance literature. More specifically, I review theories that discuss creative performance as a standalone construct or in conjunction with innovation implementation. The review excludes theories that solely discuss innovation implementation (e.g., Klein & Sorra, 1996). In the following, I will compare and contrast the Componential Theory of Creativity and Innovation (Amabile, 1983, 1996), the Model of Creativity and Innovation in Work Groups (West & Farr, 1990; West, 2002), as well as the Interactionist Perspective on Organisational Creativity (Woodman, Sawyer, & Griffin, 1993).

One of the most widely cited theories in the creativity literature is the *Componential Theory of Creativity and Innovation* (Amabile, 1983, 1996), which explains creative performance from a social psychological perspective. Amabile's model outlines three major components as necessary antecedents of individual creative performance: domain-relevant skills, creativity-relevant skills, and intrinsic task motivation. Domain-relevant skills are described as "the basis from which any performance must proceed" and constitute "the raw materials for creative productivity" (Amabile, 1988, p.130f). Said skills include factual knowledge, technical skills, as well as talents relevant to the respective domain one operates in. Domain-relevant skills represent an individual's capability to respond to work-related challenges and are best thought of as available cognitive pathways for problem solving (Amabile, 1988). Creativity-relevant skills go beyond what is

required to be solely able to perform to an adequate standard and introduces a set of skills that are of paramount importance to perform *creatively* (e.g., in terms of idea generation; Amabile, 1996). Creativity-relevant skills include both stable individual difference factors as well as skills that are trainable. For example, in regard to individual differences both the personality trait openness to experience as well as cognitive styles related to understanding complexity have been proposed to facilitate creative performance (Amabile, 1988; Hennessey & Amabile, 2010). Furthermore, research on creativity trainings revealed that the development of cognitive skills involved in skill application (e.g., problem finding, information gathering, or idea evaluation) could increase individual creative performance (G. Scott, Leritz, & Mumford, 2004). Intrinsic motivation, defined as any motivation that arises from an individual's positive reaction to the qualities of the respective task itself, is the final and most important component in Amabile's theory (Amabile, 1988, 1996). Intrinsic motivation is the kind of motivation that occurs when the subsequent creative act is an end and not a means towards achieving some other extrinsic reward (Amabile, 1996). In fact, extrinsic factors (e.g., monetary rewards or expected evaluation) and related extrinsic motivation are proposed to undermine both intrinsic motivation and creative performance (Deci & Ryan, 1985; Hennessey & Amabile, 2010). The reason for the relative importance of intrinsic motivation in the creative process is due to the fact that high levels of such motivation can make up for an individual's deficiencies regarding domain-relevant or creativity-relevant skills (Amabile, 1988). Thus, motivation in this context acts as a catalyst determining what an individual *can do* and what one *will do* (Amabile, 1988). The former depends on the level of domain-relevant and creativity-relevant skills an individual possesses, whereas the latter is determined by intrinsic motivation (i.e., intrisic motivation determines the application of skills in the creative process; Amabile, 1988). Amabile (1988) further proposes that the three components that determine individual creative performance interact with characteristics of the wider

work environment to impact overall organisational innovation. Those environmental characteristics include an organisational motivation to innovate (i.e., an organisational orientation towards innovation heavily influenced by the CEO), resource availability (e.g., regarding finances, time, and personnel resources), as well as managerial practices that spark creativity and innovation (e.g., enabling challenging work and supervisory support; Amabile & Conti, 1999; Amabile, Schatzel, Moneta, & Kramer, 2004; Amabile, 1988).

Amabile's theory was one of the first that provided an account of how various determinants (e.g., individual difference factors and intrinsic motivation) interact to influence creative performance. However, the proposed componential model almost exclusively focuses on factors that influence creative performance on the individual level of analysis or below (i.e., on the within-individual level of analysis; Amabile, Barsade, Mueller, & Staw, 2005). Despite the fact that the theory argues that the same components are relevant for both individual creative performance as well as the creative performance of small groups, the componential model does lack specificity with regards to higher level theorising that exists in other frameworks pertaining to group creativity (e.g.,West, 2002). For example, the role of group task characteristics, group processes such as reflexivity, or leadership are not discussed in Amabile's theoretical framework. The same criticism applies with regards to the componential model's predictions regarding organisational innovation. Whilst Amabile's theory acknowledges the differences between creative performance (i.e., idea generation) and innovation (i.e., the implementation of ideas in practice), multilevel theorising on the interrelationships between factors impacting creative performance, innovation, or both can be found in more detail elsewhere (e.g., Woodman et al., 1993).

Beyond Amabie's theory that mainly focused on individual factors relevant for creative performance, several scholars acknowledged that most creative work in organisations is done in teams, warranting a group-level examination of creative

performance and innovation. Most prominently, West and colleagues proposed an *Integrative Model of Creativity and Innovation Implementation in Work Groups* (West & Farr, 1990; West, Hirst, Richter, & Shipton, 2004; West, 2002). The model elaborates upon four components that influence group creativity and innovation implementation: Group composition, group task characteristics, group processes, as well as external demands. First, West (2002) argues that organisations need to carefully select individuals with certain qualities into work groups that are expected to perform creatively. A high value is put on diversity in knowledge, skills, and abilities of group members as a more diverse group composition is proposed to increase group creativity and innovation by means of constructive conflict (West, 2002). Similarly, individual difference factors (e.g., personality) fall into the category of group composition (West et al., 2004). West and colleagues (2004) argue to select innovative individuals (e.g., self-disciplined individuals with a high need for freedom, control, and discretion in their work) into work groups in order to ensure group creativity and innovation. Second, group tasks need to be designed in a way that they are intrinsically motivating (West et al., 2004). This requires tasks to be complete (i.e., involving independent goal setting and task performance, as well as the provision of performance feedback), and to be characterised by varied demands as well as opportunities for social interaction and learning (West & Sacramento, 2006). Third, West's theory outlines team processes conducive to group creativity and innovation. For example, the existence of a clear vision and related objectives that drive group performance, group participation in decision making, as well as group psychological safety (i.e., an umbrella term subsuming topics such as group affective tone, safety climate, and conflict acceptance) and reflexivity (i.e., the extent to which team members collectively reflect on the team's objectives, strategies, and processes) all influence a group's potential for creative performance and innovation (West, 2002). Fourth, West (2002) suggests that the external context of a group (e.g., organisational climate, support systems, or

environmental uncertainty), termed external demands, differentially influences

group creativity and innovation. Whilst a high level of external demands

undermines group creative performance, it is proposed to facilitate group

innovation (West & Sacramento, 2006). External demands such as environmental

uncertainty inhibit group creative performance because it is antithetical to group

psychological safety that is needed for group idea generation (West, 2002).

Conversely, pressures arising from environmental uncertainty or managerial

demands can facilitate innovation because such external demands help to

overcome a myriad of obstacles (e.g., resistance to change, structural or cultural

barriers) that may arise in the process of implement a new idea in practice (West et

al., 2004).

The theoretical framework proposed by West and colleagues provides a

detailed account of relevant factors and their interrelationships in influencing

creativity and innovation at the group level of analysis. This strength, however, can

also be interpreted as a limitation. Despite the fact that West's model arguably

encompasses all three components of Amabile's theory, namely, domain- and

creativity-relevant skills as well as intrinsic motivation on the group level, it lacks

specificity with regards to how individual-level variables affect creative

performance. For example, the model does not sufficiently specify how an

individual's affect or intrinsic motivation may contribute to group affective tone or

group task motivation and subsequent group outcomes. In a similar vein, whilst the

influence of some organisational factors (e.g., organisational climate, support

systems) on group performance is acknowledged by West's theory, a clear bottom

up multilevel perspective including organisation-level outcomes is missing.

Finally, creative acts of individuals as well as teams are only useful if they

increase overall organisational innovation. Therefore, a broad theoretical

framework is necessary to depict interrelationships between individual factors and

group processes in boosting organisational innovation. Said framework is provided by Woodman and colleagues (Woodman et al., 1993; Woodman & Schoenfeldt, 1989), who advanced an *Interactionist Perspective of Organisational Creativity and Innovation*, which proposes a complex system of interactive effects between the individual and his or her work situation at different levels of the organisation. Woodman's model exhibits substantial overlaps with both Amabile's componential model (e.g., with regards to its predictions at the individual level), as well as with West's team innovation model (e.g., regarding predictions at the group level). Thus, at the individual level Woodman et al. (1993) propose individual creativity to be the result of antecedent conditions (e.g., demographic variables), cognitive style and ability, personality, knowledge and skills as well intrinsic motivation in interaction with contextual influences (e.g., factors pertaining to the physical work environment). At the group level, creative performance is determined by the level of individual creative behaviour, the quality of group member interactions and group characteristics (e.g., in terms of group composition), as well as group processes (e.g., leadership or group cohesiveness) in interaction with contextual influences (e.g., organisational culture). Organisational creative performance and innovation, in turn, is proposed to be a function of both individual and group creativity in interaction with organisational contextual influences (e.g., resource availability, organisational structure and strategy).

The key strength of Woodman's model is that it provides an overarching framework to explain interrelationships between individual, group, and organisation-level factors and related contextual influences on creative performance and innovation whereas the predictions other theories permit are mostly limited to one level of analysis (e.g., the individual or group level, respectively; Amabile, 1996; West, 2002). Whilst the theoretical scope of Woodman's model is broad, it does not offer a detailed account of the specific

interrelationships that influence idea generation and implementation at each level of analysis. For example, the model lacks a within-individual perspective on creative performance explaining the antecedents and consequences of within-person performance variability (see Dalal, Bhave, & Fiset, 2014 for an overview of the importance of considering the within-person variability in creative performance).

To summarise, the theories described in this section have been used to explain interrelationships between individual, group, and organisational variables and creative performance and innovation. However, the scope of explanation that each theory permits varies. Amabile's (1996) theory represents a micro-level approach that allows for predictions pertaining to the impact of individual and within-individual factors on creative performance but lacks specificity regarding the group and organisational levels of analysis. West's (2002) theory is best described as a meso-level perspective, which offers detailed propositions for the influence of group-level variables on creative performance and innovation. Finally, Woodman et al's theory (1993) represents a macro approach to creative performance and innovation. Whilst Woodman's perspective is the only framework that explicitly allows for cross-level predictions it lacks detailed, specific predictions for relevant interrelationships at each level of analysis (e.g., within-individual, individual, group, and organisation-level).

In essence, from a theoretical point of view creative performance emanates from individuals and work teams to spark organisational creativity and innovation. However, available theoretical frameworks fail to offer a detailed, comprehensive explanation of multilevel linkages in regard to the determinants of creative performance. Thus, in order to develop a research model for the current thesis it is necessary to chose a theoretical framework and related level of analysis that is suitable for the research question of this thesis. Therefore, for the current investigation I choose to examine determinants of creative performance on the

individual or micro level, which is most closely reflected in the theoretical framework offered by Amabile (1988, 1996).

3.3 EMPIRICAL EVIDENCE FOR DETERMINANTS OF CREATIVE PERFORMANCE

In this section, I will review empirical evidence in the creative performance literature. Due to the fact that creative performance is one of the most-researched outcomes in the domain of organisational behaviour with a myriad of variables examined on various levels of analysis (for an overview see Anderson, Potocnik, & Zhou, 2014 and Zhou & Hoever, 2014) I limit the scope of my review to determinants of creative performance that are relevant for this thesis. Informed by EASI theory (van Kleef, 2009), those predictors involve leadership, affective and cognitive underlying mechanisms, and boundary conditions pertaining to information processing depth as well as to the perceived appropriateness of emotional expressions. This approach is also in line with the aforementioned micro-level perspective adopted by this thesis as Amabile's theoretical framework acknowledges leadership, as well as affective and cognitive processes as key influencing factors for individual creative performance (e.g., Amabile et al., 2004; Amabile, 1996).

3.3.1 Leadership

A wealth of research has investigated the role of leadership in increasing follower creative performance (see Mainemelis, Kark, & Epitropaki, 2015 for an overview on leadership and creativity research). In the following, I will review empirical evidence pertaining to the effects of various leadership styles on follower creative performance that encompass a wide range of leader behaviours (e.g., transformational leadership) as well as others that limit themselves to more specific

leader behaviours (e.g., empowering and authentic leadership, leader-member exchange, and emotional expressions).

A host of studies investigated the effects of transformational leadership on follower creative performance (Eisenbeiß & Boerner, 2013; Gumusluoglu & Ilsev, 2009; Henker, Sonnentag, & Unger, 2015; Hirst, van Dick, & van Knippenberg, 2009; Jung, 2001; Nederveen Pieterse, Van Knippenberg, Schippers, & Stam, 2010; Shin & Zhou, 2003). Research has generally yielded mixed results with some studies reporting positive direct relationships between transformational leadership and creative performance (e.g., Eisenbeiß & Boerner, 2013; Gumusluoglu & Ilsev, 2009; Shin & Zhou, 2003). Additionally, researchers investigated several underlying mechanisms that can explain the effect of transformational leadership on follower creative performance, such as intrinsic motivation (Shin & Zhou, 2003), follower psychological empowerment (Gumusluoglu & Ilsev, 2009; Sun, Zhang, Qi, & Chen, 2012), or creative process engagement (Henker et al., 2015). Furthermore, researchers have started to examine the boundary conditions under which transformational leadership affects creative and innovative performance, for example follower levels of psychological empowerment (Nederveen Pieterse et al., 2010), personal values (Shin & Zhou, 2003), or more complex three-way interactions between transformational leadership, leader prototypicality, and team identification (Hirst et al., 2009) have been proposed in this regard.

Research shows that the relationship between empowering leadership and follower creative performance is even less straightforward (Zhang & Bartol, 2010a; Zhang & Zhou, 2014). Zhang and Bartol (2010) showed that empowering leadership is positively related to follower creativity via a mediation mechanism involving follower psychological empowerment, creative process engagement, and intrinsic motivation. Furthermore, the researchers proposed several boundary conditions for these interrelationships (e.g., empowerment role identity and leader

encouragement of creativity). Zhang and Zhou (2014) reported a positive relationship between empowering leadership and follower creative performance via follower creative self-efficacy. They further showed that the relationship between empowering leadership and follower creative self-efficacy is conditional on follower levels of uncertainty avoidance and trust in the supervisor (i.e., a three-way interaction).

Apart from leadership styles focused on inspiring or empowering followers to be creative, a growing literature started to investigate the role of relationship quality between leaders and followers (i.e., leader-member exchange; Uhl-Bien, 2006) in fostering follower creative ideation. Thus, several studies have adopted a relational approach to leadership and examined its effect on follower creative performance (Atwater & Carmeli, 2009; Tierney, Farmer, & Graen, 1999; Volmer, Spurk, & Niessen, 2012). Tierney et al. (1999) reported that leader-member exchange (LMX) is positively related to follower creative performance and that this relationship is conditional on follower cognitive style. Volmer and colleagues (2012) showed a positive relationship between LMX and creative work involvement and identified job autonomy as a boundary condition of this relationship. Similarly, Atwater and Carmeli (2009) report a positive relationship between LMX and follower creative work involvement. Their research emphasises a potential underlying mechanism in this relationship, namely follower feelings of energy.

Furthermore, two studies by Rego and colleagues (Rego, Sousa, Marques, & Pina e Cunha, 2012, 2014) have investigated the impact of authentic leadership on follower creative performance. In an initial study the researchers showed that authentic leadership is positively related to follower creative performance via increases in follower psychological capital (Rego et al., 2012). In a subsequent study, they identified two additional underlying mechanisms of the authentic

leadership – follower creative performance relationship: follower positive affect as well as hope (Rego et al., 2014).

Finally, two studies have investigated the impact of leader displays of discrete emotions on follower creative performance (van Kleef et al., 2010; Visser et al., 2013). Visser and colleagues (2013) showed that leader displays of happiness increase follower performance on creative tasks via follower increases in positive affect. Van Kleef et al. (2010) investigated the relationship between leader anger and follower creative performance. The researchers showed that leader displays of anger are related to follower creative performance via follower task engagement conditional on follower levels of epistemic motivation. For follower with high levels of epistemic motivation leader anger would spark creative performance via increases in task engagement. Conversely, for low epistemic motivation followers leader anger was shown to diminish creative performance via decreases in task engagement.

Generally, the research focus of the literature on leadership and follower creative performance currently shifts from investigating the impact of leadership styles that encompass a wide range of leader behaviours and thus often lack conceptual clarity (e.g., transformational leadership; van Knippenberg & Sitkin, 2013) to examining more specific, concrete leader behaviours such as emotional expressions as predictors of follower creative performance. Whilst there is substantial evidence available on the effects of various leadership styles (e.g., transformational, LMX, or authentic leadership) on follower creative performance, it is often difficult disentangle which concrete leader behaviour drives the effect on follower creative performance. For example, in the case of transformational leadership the sub-dimensions inspirational motivation (e.g., Hirst et al., 2009) as well as intellectual stimulation (e.g., Eisenbeiß & Boerner, 2013) could both account for the creativity-inducing effect, which consequently limits the theoretical

and practical implications that follow from such research. For the current thesis I thus deem it important to focus my investigation on concrete leader behaviours such as emotional expressions to be able to clearly identify the source of the creativity-inducing effect as part of the leadership process.

3.3.2 Affect and cognition

Affective and cognitive processes play a central role in theories pertaining to creative performance (e.g., the *Componential Model of Creativity*; Amabile, 1996) as well as leader emotional expressions (e.g., the *Emotions as Social Information* theory; van Kleef, Homan, & Cheshin, 2012) because affect and cognition help explain how leader emotional influence is translated into follower behavioural change including changes in creative performance. Therefore, this section will review empirical evidence regarding the impact of affective and cognitive processes on creative performance to the end of informing and complementing the research model of this thesis.

Similar to the leadership and creativity literature, there is a substantial evidence base for how affect influences creative performance on various levels of analysis (e.g., within-individual, individual, and group levels). Metaanalytic evidence shows that positive activating affective states (e.g., happiness) are positively related to creative performance, whereas negative activating affective states (e.g., fear, anxiety) have a deleterious effect with regards to creative performance (Baas et al., 2008). Whilst some studies report results that are in line with this metaanalytic finding (Amabile et al., 2005; Binnewies & Wörnlein, 2011; Madjar, Oldham, & Pratt, 2002), others insinuate that the relationship between affect and creative performance may be more complex. For example, To and colleagues (2012) showed that both activating positive and negative affect were positively related to creative process engagement. The researchers further identified boundary conditions of the relationship between activating positive affect

and creative process engagement, namely high levels of learning goal orientation, prove goal orientation, as well as supervisory support. George and Zhou (2007) reported a series of three-way interactions showing that creative performance is highest if both positive and negative affect are at high levels as well as supervisor developmental feedback, interactional justice, and trust and the supervisor are given. Investigating team creativity, Tsai and colleagues (2012) found a three-way interaction where team positive affective tone only had a positive effect on team creativity in case team trust was low and team negative affective tone was high. Bledow and colleagues (2013) provided evidence to substantiate the claim that an episode of negative affect followed by a decrease in negative affect and an increase in positive affect (i.e., termed affective shift) boosts creative performance. Finally, Fong (2006) revealed that emotional ambivalence (i.e., the simultaneous experience of both positive and negative affect) is a potent predictor of creative performance. Generally, future research needs to further elucidate whether positive affect, negative affect, or both are conducive to creative performance (Anderson et al., 2014).

Research on the effects of cognition on creative performance has received less research attention. Generally, cognitive ability as an individual difference factor has been shown to be associated with creative performance but only modestly (e.g., r = 0.2; Feist & Barron, 2003; Hennessey & Amabile, 2010). Research on cognitive styles showed that whereas an intuitive thinking style was positively related to creative performance, a systematic thinking style showed no relationship (Clegg, Unsworth, Epitropaki, & Parker, 2002). Sagiv and colleagues (2010) reported results from two quasi-experimental studies that showed that individuals with intuitive cognitive styles are only superior to their systematic thinking counterparts if the task they perform is largely unstructured. Identifying externally imposed structure as a boundary condition the researchers showed that under the condition of highly structured tasks, intuitive and systematic thinkers showed no

difference with regards to creative performance. Investigating predictors of radical innovation, Miron-Spektor and colleagues (2011) found that teams with members that have a creative or conformist thinking style were more innovative, whereas attentive-to-detail team members stifled their team's innovation.

Taken together, past research shows that both affect and cognition are potent predictors of creative performance, which is why these processes will be considered for the research model of this thesis. Since the pattern of relationships between affect, cognition, and creative performance has often been reported to be complex and dependent on other contingency factors, I will review potential boundary conditions that may play a role in this respect. More specifically, in the subsequent sections I will review empirical evidence pertaining to factors related to information processing depth as well as regarding the perceived appropriateness of emotions that have been advocated by EASI theory as important boundary conditions for the relationship between leader emotional expressions and follower creative performance (van Kleef et al., 2012).

3.3.3 Factors related to information processing depth

EASI theory (van Kleef, 2009) postulates that whether or not leader behaviours elicit affective or cognitive reactions depends on follower's information processing depth or epistemic motivation. Van Kleef and colleagues (2011, 2012) further suggest that epistemic motivation is partly rooted in personality factors such as higher openness to experience, higher need for cognition, lower personal need for structure, and lower need for cognitive closure. Thus, in this section I will review empirical evidence linking the aforementioned personality factors to creative performance.

Past research has consistently linked the personality trait openness to experience to creative performance (see Feist, 1998 for a metaanalytic evidence). Studies conducted after 1998 largely replicate the finding that openness to

experience is positively associated with creative performance (e.g., George &

Zhou, 2001; Raja & Johns, 2010). However, many research studies post 1998

examined and identified boundary conditions of this relationship. For example,

George and Zhou (2001) reported a three-way interaction between openness to

experience, feedback valence, and task type. Baer and Oldham (2006) showed

that there is a curvilinear relationship between time pressure and creativity in case

individuals have high level of openness to experience as well as support for

creativity. In another study, Baer (2010) showed that the benefits of having a

moderately sized and highly diverse network of weak ties only emerge individual

high in openness to experience.

Two studies revealed interactive effects involving personal need for

structure on creative performance. Goclowska and colleagues (2014) people and

events that disconfirm observers' expectancies (i.e., social schema violations) are

positively related to creative performance for observers with low levels of personal

structure. Similarly, van Kleef (2010) showed that leader expressions of anger

solely spark follower creative performance in case their levels of personal need for

structure are low (i.e. in case of high epistemic motivation).

Finally, Wu and colleagues (2014) investigated individual need for cognition

as an antecedent for innovative behaviour and found that when both autonomy and

time pressure were low need for cognition had a stronger, positive association with

innovative behaviour.

In sum, empirical evidence concerning the effects of factors relating to

information processing depth is in line with theoretical assertions made by EASI

theory (van Kleef, 2009). Factors indicative of high epistemic motivation (e.g., high

openness to experience or low need for structure) are positively associated with

creative performance. Therefore, for the current investigation it is important to

consider that follower cognitive reactions to leader emotional influence including

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increases in creative performance are only likely to be triggered in case followers are equipped with high levels of epistemic motivation.

In the following sections, I will discuss factors beyond follower's information processing depth that may influence how leader emotional expressions are perceived. More specifically, emotional expressions can be perceived as inappropriate by observers, which can potentially undermine the intended effect of leader emotional influence.

3.3.4 Factors related to the perceived appropriateness of emotional expressions

EASI theory (van Kleef et al., 2012) states that various environmental (e.g. national culture, organisational climates) or personal (e.g., status) factors can potentially contribute to whether or not an emotional expression by a leader is considered to be appropriate. This section will therefore review the impact culture and climates have on creative performance.

Despite previous calls for further research, few studies have addressed the impact of national culture on creative performance (Anderson et al., 2014). Elenkov and Manev (2005) found that the national culture dimensions power distance and masculinity were positively related to organisational innovation. Tadmor and colleagues (2012) showed that when individuals make experiences in a foreign country their identification with both the host culture as well as their home culture increases their creative performance more compared to colleagues that only identified with one of those cultures (e.g., host or home culture). They further found this effect to be mediated by integrative complexity. With regards to the group level, metaanalytic evidence shows that cultural diversity amongst team members facilitates group creative performance (Stahl, Maznevski, Voigt, & Jonsen, 2010).

With regards to organisational climates, past research has consistently shown that a climate supportive of innovation is positively associated with

organisational innovation (Jung, Wu, & Chow, 2008; Patterson et al., 2005). This finding is also corroborated by metaanalytic evidence pertaining to team innovation (Hülsheger, Anderson, & Salgado, 2009). However, several studies have also highlighted the need to investigate boundary conditions of the relationship between climates for innovation and innovation (i.e., creativity and idea implementation; Chen & Hou, 2016; Eisenbeiss, van Knippenberg, & Boerner, 2008; Somech & Drach-Zahavy, 2013). Eisenbeiss et al. (2008) reported that team innovation is a function of the interactive effect between support for innovation and a climate of excellence. Somech and Drach-Zahavy (2013) investigated team innovation by examining the creativity and idea implementation stage separately. The researchers showed that team composition (e.g., creative personality of team members) affected team creative performance. Furthermore, team creative performance was related to team innovation implementation contingent on climate for innovation. Finally, Chen and Hou (2016) reported that individual creative performance is a function of ethical leadership that promotes individual voice behaviour in combination with a strong climate for innovation.

Research on factors that influence the perceived appropriateness of leader behaviour indicates that national culture and climates at work are associated with creative performance and innovation implementation at multiple levels of analysis. However, more research is needed to conclusively explore underlying mechanisms and boundary conditions of these relationships whilst ideally distinguishing between creative performance and innovation implementation as outcome variables (see Somech & Drach-Zahavy, 2013 for an exception). Of particular importance for this thesis, there is a paucity of research on what is considered appropriate leader emotional influence to the end of sparking follower creative performance. Although it is not the explicit focus of the current investigation, it can be assumed that leaders by means of their elevated hierarchical position within a group will be judged less harshly even when displaying inappropriate emotions.

This may be explained by a phenomenon called *transgression credit*, which states that ingroup leaders are judged less harshly for serious transgressions compared to other group members as their actions are perceived to be in the group's best interest (e.g., Abrams, Randsley de Moura, & Travaglino, 2013). Further research beyond the current investigation is needed to test these assumptions.

3.3.5 Integration of Literature Reviews

The empirical evidence presented in this chapter showcases that factors pertaining to all dimensions of EASI theory (e.g. leadership, affective and cognitive processes, information processing depth, and perceived appropriateness of emotional expressions; van Kleef, 2009) have been shown to be associated with creative performance. More specifically, as part of the review, an investigation of concrete leader behaviours such as emotional expressions emerged as the preferred option as it allows to more clearly attribute a potential creativity-inducing effect to individual behaviours as opposed to multi-faceted leadership styles (e.g., transformational leadership; van Knippenberg & Sitkin, 2013). In regard to affective and cognitive processes, as well as related factors regarding information processing depth relevant for creative performance, my review suggests that it is important to account for these processes in my investigation. Consequently, this thesis will include epistemic motivation as a measure of follower information processing depth in every study. As epistemic motivation acts as a contingency factor determining the relative precedence of cognitive (i.e., in case of high epistemic motivation) or affective processes (i.e., in case of low epistemic motivation) in observers (van Kleef et al., 2012), its inclusion into this thesis enables me to distinguish what type of underlying process explains the effect of leader emotional influence on follower creative performance. Finally, I have reviewed the growing evidence base surrounding the impact of factors related to the perceived appropriateness of emotional expressions on creative performance.

Whilst this thesis does not explicitly investigate the appropriateness of certain

emotional expressions to foster follower creative performance, I propose that

leaders occupy special roles within work groups that allow them to express a

variety of emotions without being judged harshly by followers since their behaviour

is usually perceived to be in their group's best interest (e.g., Abrams et al., 2013).

Therefore, I conclude that when leading for creativity, managers should have

degrees of freedom to express various emotions without it being perceived as

inappropriate by followers. Overall, EASI theory (van Kleef, 2009) appears to be a

useful framework in explaining both the intricate process of social influence exerted

by means of leader emotional expressions as well as its impact on follower creative

performance.

Based on the insights gained from the literature review on leadership and

affect described in Chapter 2 as well as the present literature review of the

determinants of creative performance relevant to the current research project I

draw from EASI theory (van Kleef, 2009) to develop a research model that guides

the subsequent studies presented in this thesis. More specifically, having identified

a paucity of research on leader emotional inconsistency as a gap in the literature

on leadership and affect, I set out to investigate the impact of inconsistent leader

emotional expressions in a cooperative leader-follower relationship. Following the

call of various scholars to investigate concrete leader behaviours as predictors of

creative performance (e.g., Amabile et al., 2004; van Knippenberg & van Kleef,

2016) I examine the impact of leader emotional inconsistency on follower creative

performance. Finally, informed by EASI theory (van Kleef, 2009) I advance

hypotheses for underlying mechanisms and boundary conditions that further help

explain the interrelationship between leader emotional inconsistency and follower

creative performance. Importantly, the studies in this thesis do not constitute a

complete test of all theoretical mechanisms put forward by EASI. Instead, I aim at

testing the cognitive and affective pathways of leader emotional influence proposed

by EASI theory by measuring epistemic motivation (i.e., high vs. low levels as an indicator of cognitive vs. affective reactions in followers) as a proxy. In fact, most studies using EASI as theoretical framework in the past have not provided a complete test of the theory and have instead either focused on examining one pathway of emotional influence (e.g., affective, Visser et al., 2013) or measured epistemic motivation as a proxy (e.g., van Kleef, Homan, et al., 2009).

CHAPTER 4:

GENERAL METHODOLOGY

4.1 CHAPTER SUMMARY

This chapter provides an overview of general methodological matters surrounding the studies that have been conducted as part of this thesis. Specifically, I advocate a critical realist perspective as the guiding philosophical framework of this thesis as well as the use of quantitative methods that follows from this philosophical stance. The chapter opens with a comparison of dominant philosophical paradigms within leadership research followed by a section on the research designs and methodologies that have been used throughout this thesis. I conclude with a discussion of issues pertaining to research ethics and data protection.

4.2 RESEARCH PHILOSOPHY

4.2.1 Research Philosophies in the Social Sciences

The choice of a particular research method, be it the conduct of interviews, experiments, or field studies is informed by a philosophical paradigm that shapes the respective researcher's understanding of the nature of reality (Saunders, Lewis, & Thornhill, 2009). The existence of a phenomenological understanding of reality is useful as it allows researchers to deduce appropriate measures to investigate the myriad of variables that influence human perception and behaviour from a social scientific perspective. Some scholars go so far as to argue that questions concerning the choice of research methods are of secondary importance to questions pertaining to a researcher's philosophical stance that ultimately informs all scientific endeavours (Guba & Lincoln, 1994). For the present thesis, it follows that it is warranted to compare the different philosophical perspectives that govern research in the domain of scientific enquiry the subsequent studies aim to contribute to i.e., leadership research. Therefore, in the following I will consider

different approaches to the nature of reality (i.e., ontology), what that tells researchers about what can be inferred from reality (i.e., epistemology), which eventually leads me to the question of what researchers can achieve through their study of leadership-related phenomena (i.e., axiology; Lee & Lings, 2008).

The term ontology represents different philosophical positions that entail diverging sets of beliefs about how to describe reality and specific phenomena that exist as part of it (e.g., phenomena pertaining to leadership research; Saunders et al., 2009). From an ontological perspective two broad set of beliefs exist, namely objectivism and subjectivism (Saunders et al., 2009). The objectivist tradition proposes that an objective reality exists that is external to the observer, whereas subjectivism views reality as an ever-changing social construction by means of interactions between social actors (Lee & Lings, 2008). For example, an objectivist view on leadership would entail that managers in an organisation enact particular leadership styles, however, these managerial practices would still exist even if employees would not follow suit or would not be influenced by them. Conversely, a subjectivist perspective on leadership would dictate that such managerial practices are the result of ever-changing and evolving interactions between relevant social actors in this context (e.g., leaders and followers) that give them meaning in the first place.

Given the differences in perspectives on the nature of reality, the question becomes what researchers can know of and infer from reality, which is termed epistemology (Lee & Lings, 2008). Three broad distinctions can be made here, namely between positivism and realism following from an objectivist ontological tradition, as well as between interpretivism, which reflects the subjectivist ontological tradition.

Positivism reflects the philosophical stance that is adopted by the natural sciences and comes with two main assumptions about the research process (Lee

& Lings, 2008). First, the researcher is viewed as an actor that is independent of and external to the phenomenon under investigation. For example, this belief entails that the researcher's involvement in data collection neither affects him or her, nor the quality of data collected (Lee & Lings, 2008). Furthermore, a positivist stance involves the notion that research is conducted in a value-free way, which means that researcher's choices what to research and how solely follows from objective criteria and not based on personal research interests (Bryman, 2012). Applying the positivist narrative in the context of leadership research would entail the assumption that conducting a field study in an organisation on leadership practices would not affect how employees of that organisation perceive or think about this topic. Furthermore, the choice of the particular topic of investigation within the leadership literature is assumed to not reflect any personal values or interests of the researcher.

Realism can be considered to be an extension of the epistemological stance of positivism in that it shares the assumption of an objective reality independent of the human mind (Saunders et al., 2009). One can distinguish between two types of realism, namely direct realism and critical realism (Saunders et al., 2009). Whilst direct realism assumes that human sensory experiences are accurate representations of reality (i.e., what you see is what you get), critical realism purports that human experiences are inaccurate and sometimes deceptive images of phenomena in the real world (Bryman, 2012). Because critical realists do not believe in a direct and accurate sensory experience of the reality around them a second step is argued to be necessary after a sensory experience has taken place, namely the interpretation of said experience given the context in which it has taken place (Saunders et al., 2009). Importantly, a critical realist perspective allows the interpretation of phenomena from different perspectives (e.g., by means of multilevel research designs) as well as it recognises that phenomena are

constantly changing, which needs to be reflected in the research process (e.g., by means of using longitudinal research designs; Saunders et al., 2009). Thus, according to critical realism the extent to which an objective reality can be accurately perceived depends on our interpretation of it, which in turn is guided by an understanding of the social structures and processes that underlie the phenomena of interest (Bhaskar, 1989). For example, a critical realist would acknowledge the social context in which an employee follows a manager's leadership, which may be because said manager is particularly charismatic.

In contrast, interpretivism advocates for a perspective where the role of humans as social actors in the research process is considered to be central tenet (Lee & Lings, 2008). Accordingly, both the researcher's choices what to study (i.e., research interests) and how (i.e., research methodology) as well as research participant's interactions with them at a particular time and place are co-creators of knowledge (Holden & Lynch, 2004). Overall, the social actors (i.e., researchers and research participants) in the research process are the ones that give it meaning. Consequentially, context-dependent knowledge generated this way is considered to be unique and not generalisable (Lee & Lings, 2008). Using the leadership example described earlier, interpretivists would conduct an in-depth examination of both the manager's as well as the employee's views on the leadership process, the result of which would be considered to be a unique relationship that could not be generalised to the manager's relationships with other employees.

A final philosophical faultline concerns what researchers are trying to achieve through their studies (i.e., axiology; Lee & Lings, 2008). The aim of researchers subscribing to a positivist or realist stance is not only to understand the phenomena under investigation but also to explain and predict causal effects between phenomena across situations (Saunders et al., 2009). Positivist and realist research seeks to identify generalisable laws that explain regularities in

human behaviour (Holden & Lynch, 2004). This is done by following the hypothetico-deductive method, which involves theory development based on initial observations, followed by empirical studies to (dis)confirm theoretical claims, as well as validating obtained results across a variety of settings (Lee & Lings, 2008). Methodologically, this entails that concepts under investigation require clear operationalisation, a simplification of complex phenomena for research purposes, as well as data drawn from large and representative samples of the respective population of interest (Bryman, 2012). Generally, such an approach necessitates the use of quantitative methods, for example, a longitudinal questionnaire design using valid and reliable measurement scales.

Conversely, interpretivists are less concerned with the generalizability of findings or causal relationships between variables and instead focus on an in-depth examination of what they consider to be unique phenomena (Lee & Lings, 2008). Usually, this involves the application of inductive reasoning and theory development, whereby the researcher arrives at a conclusion by making sense of data patterns during and after data collection (Saunders et al., 2009). This is done by using qualitative methods such as interviews, focus groups, ethnography, or action research. These methods yield in-depth, subjective data and use smaller samples in comparison with quantitative methods (Holden & Lynch, 2004). An advantage of qualitative methods involves that they offer a more holistic depiction of reality that goes beyond a more reductionist approach of quantitative research, which out of necessity reduces reality to a few variables (Gephart, 2004).

4.2.2 Research Philosophies in Leadership Research

Having provided an overview of different viewpoints regarding ontology, epistemology, and axiology I will briefly discuss which of these perspectives is most prevalent in the leadership literature to inform the choice of a guiding research philosophy for this thesis.

Leadership phenomena have almost exclusively been studied from the perspective of an objectivist ontology (i.e., assuming an objective reality exists), and a positivist or realist epistemology (i.e., assuming generalisable knowledge can be created) with the ultimate aim to attempt to explain and predict relationships between leadership-related phenomena utilising quantitative methods (Alvesson, 1997; P. Johnson & Cassell, 2001). Most studies reported in the leadership literature aim at testing hypotheses and generalising results. In fact, more recently scholars have emphasised the need to investigate more complex multilevel phenomena across situations and over time (e.g. Dionne et al., 2014; Hoffman & Lord, 2013), which stands in stark contrast to the non-genralisable, subjective nature of research that is informed by a subjectivist ontology and an interpretivist epistemology (Lee & Lings, 2008). Lowe and Gardner (2000) reported that until the year 2000 two thirds of the studies published in the leading leadership journal *The Leadership Quarterly* utilised quantitative methods whereas only one third of studies utilised qualitative methods. This trend intensified when examining research published between 2000 until 2009 in the same journal where 87.4% of studies employed quantitative designs and merely 24.1% used qualitative methods in their studies (Gardner, Lowe, Moss, Mahoney, & Cogliser, 2010). In sum, leadership research in the past has been predominantly guided by an objectivist ontological perspective, a positivist or realist epistemology, and employed quantitative methods (For exceptions see a review by Bryman, 2004 on qualitative leadership research).

4.3 RESEARCH PHILISOPHY AND RESEARCH DESIGNS OF THIS THESIS

Drawing from an objectivist ontology, this thesis will be guided by a critical realist epistemology rather than by a more positivist perspective. The reason for this is the assumption of positivism pertaining to the apparent value-free approach to research where studies are conducted independently of particular research

interests of the respective researcher (Saunders et al., 2009). As I am of the opinion that a value-laden approach to research involving the development of specific research interests is useful (e.g., it matters whether researchers choose to investigate specific leader behaviours instead of broad leadership styles; van Knippenberg & Sitkin, 2013) this thesis will adopt a critical realist epistemology and a related quantitative methodology to examine leadership-related phenomena. Thus, in line with the predominant philosophical and methodological tradition in the leadership literature I aim at creating generalisable knowledge about the interrelationships between the variables that feature in the studies summarised in the subsequent chapters. For this purpose, I base the proposed investigation on a solid theoretical foundation (i.e., EASI theory; van Kleef, 2009) and use appropriate methods with regards to data collection and analysis (i.e., survey data collection and quantitative data analysis methods, respectively).

With regards to study designs, in Chapters 5 and 6 of this thesis I report two experimental studies, the design of which has been adapted from a previous research project on the effects of displayed emotional inconsistency in a negotiation context (see Sinaceur, Adam, Van Kleef, & Galinsky, 2013). Please see the aforementioned chapters for a detailed description of the experimental design. Generally, the purpose of an experiment is to study causal links between variables of interest as well as to establish internal validity of a research model (Hakim, 2000). The characteristics of a classic experiment involve that participants are randomly allocated to two groups, an experimental group featuring the manipulation of a variable of interest (e.g., leader emotional inconsistency), or the control group, in which no such manipulation is made (Saunders et al., 2009). The random allocation process ensures that the groups are similar in all aspects relevant to the research other than whether or not they are exposed to the experimental manipulation, which would consequently be the causal link in case

differences between groups regarding the dependent variable are registered (Saunders et al., 2009). In line with these principles, in both of my experimental studies I randomly allocated study participants into the experimental and control group, respectively.

A common criticism of experimental studies is their lack of external validity due to an artificial laboratory environment as well as a potentially unrepresentative sample (e.g., in case of student respondents; Saunders et al., 2009). To counteract this methodological weakness I conducted a field study in an organisational context reported in Chapter 8. More specifically, by utilising a diary study design I have ensured that the methodology appropriately captures the changing nature (i.e., within-person variability) of study variables (e.g., leader behaviour and follower creative performance; Dalal, Bhave, & Fiset, 2014; Hoffman & Lord, 2013) whilst simultaneously accounting for observer recall bias (see Hansbrough, Lord, & Schyns, 2015), which would not be possible to achieve with a cross-sectional design (Bolger & Laurenceau, 2013). Practically, I sent out online surveys to both leaders and followers of UK-based organisations. For a more detailed overview of the diary study design I refer to Chapter 8. The data was collected using measurement scales that have been validated either in prior studies or as part of this thesis (see Chapter 7 for the scale development process of the leader emotional inconsistency scale).

Overall, the aim of the studies reported in this thesis is to create generalisable knowledge about the relationship between leader emotional inconsistency and follower creative performance by using various study designs. The design of the experimental studies reported in Chapter 5 and 6 allows for both the establishment of causal links between study variables as well as internal validity (Saunders et al., 2009). The diary study summarised in Chapter 8 complements the experiments in that it provides external validity to the research

model put forward by this thesis and does so rigorously by accounting for both within-person variability of study variables as well as recall bias (Bolger & Laurenceau, 2013). The following section will provide and overview of the sampling method used and participants recruited for the aforementioned studies as well as a discussion of my approach to data analysis.

4.4 DATA COLLECTION AND ANALYSIS

4.4.1 Sampling Method

In terms of quantitative sampling methods, probability sampling and non-probability sampling can be distinguished (Saunders et al., 2009). Despite the fact that probability sampling is considered to be the gold standard of sampling procedures (e.g., due to a procedure of random selection of respondents from all members of a relevant population) the likelihood of obtaining such a sample is rather unrealistic (Lee & Lings, 2008). This is particularly the case for quantitative research where the aim is to create generalisable knowledge since a perfect list of all members of the working population to randomly select from does not exist. Apart from this, the abstract notion of probability sampling is also constrained by the willingness of employees to participate in research studies, which is not always given. In fact, recruiting study participants and negotiating with organisational gatekeepers can be considered to be one of the biggest challenges in the research process (Saunders et al., 2009). Consequently, the majority of research studies conducted in the organisational sciences utilise non-probability sampling and specifically convenience sampling procedures that is based on the relative ease of access to respondents (Lee & Lings, 2008). The question becomes whether the ease of access to certain respondent samples potentially compromises the generalisability of the results obtained when examining interrelationships between study variables (e.g., leader emotional inconsistency and follower creative performance; Lee & Lings, 2008). Arguably, for study results of an investigation

into the effects of leader emotional inconsistency on follower creative performance to be generalisable respondents have to be in a dyadic leader-follower relationship (e.g., in order to potentially observe leader displays of emotional inconsistency) and need to have an explicit reason to perform creatively (e.g., to increase the likelihood that creative performance is an observable part of their work). With regards to the experimental studies reported in this thesis, a dyadic leader-follower interaction was created as part of the experimental manipulation and respondents were asked to complete a realistic creative task as a measure of their creative performance. For a detailed summary of the experimental procedure I refer to Chapters 5 and 6. The field study was conducted with real-life leader-follower dyads drawn from organisations in the UK insurance and care sector. Previous research has already established the need for employees to perform creatively in both the insurance (Gong, Huang, & Farh, 2009) as well as the care sector (West & Anderson, 1996; West et al., 2003). Therefore, I am confident that both the experimental and field samples used throughout this thesis are appropriate for the intended investigation.

4.4.2 Participants

As mentioned in the previous section, all study samples were obtained using a non-probability convenience sampling approach (Saunders et al., 2009). In regard to the samples used in the experimental studies summarised in Chapters 5 and 6, study participants were undergraduate students (94 and 81 students for the studies reported in Chapter 5 and 6, respectively) that were enrolled in a module on developing creativity at work. The module leader of said course granted access to both student samples. As part of the experimental procedure, I created a dyadic leader-follower situation by inducing leader emotional inconsistency via a video (see Chapter 5) and a scenario type (see Chapter 6) manipulation. Study participants were asked by the leader to complete a creative task in order to assist

him with one of his current projects. Please see Chapters 5 and 6 for a more detailed description of the experimental procedure. Previous research has successfully used these procedures in conjunction with student samples to manipulate emotional inconsistency as well as to show an impact of leader nonverbal communication on follower creative performance (Sinaceur et al., 2013; van Kleef et al., 2010), which is why I believe that said samples were an appropriate basis to subject my study model to an experimental test to the end of establishing internal validity (Lee & Lings, 2008).

With regards to the field sample used for the study reported in Chapter 8, I contacted a total of 104 organisations, across a variety of sectors and industries (e.g., finance, marketing, consumer goods, manufacturing), of which two organisations agreed to participate in a weekly diary study. I was able to obtain usable data from 60 leader-follower dyads and received a total of 253 matched weekly employee and manager responses. As the organisations I drew the study sample from operated in two different sectors (e.g., the insurance and care sector, respectively) I controlled for organisational membership of employees in my analyses. Moreover, since employees in both the insurance and care sector need to perform creatively as part of their job (e.g., Gong et al., 2009; West et al., 2003) I believe that said sample is an appropriate basis for a field test of this thesis's research model and the establishment of external validity (Saunders et al., 2009).

4.4.3 Approach to Data Analysis

In an experimental study, participants are usually presented with a manipulation of the independent variable in situ (Lee & Lings, 2008). Thus, the subsequent questionnaire, in turn, will be able to assess the effect of the independent variable on the dependent variable relatively close to the conclusion of the manipulation-inducing event (Saunders et al., 2009). Therefore, drawing from a general linear modelling perspective I used path analysis as the preferred method

in my experimental studies reported in Chapters 5 and 6 to establish support for my theory-derived moderated mediation model.

However, collecting experimental data after a successful manipulation of a variable of interest does not necessarily reflect data collection procedures within field research, which has implications for data analysis and the quality of potential inferences made based on said data. For example, inferences made from results based on cross-sectional data collected at one point in time are very unlikely to provide an accurate representation of the impact of leader behaviour on follower performance outcomes. This is because such data collection fails to capture the within-person variability of performance outcomes (e.g., in-role or creative performance; Dalal et al., 2014). Furthermore, results based on cross-sectional data and related analysis techniques (e.g., linear regression analysis; Field, 2009) are prone to be affected by recall bias and measurement inaccuracy of study constructs (Hansbrough et al., 2015; Ohly, Sonnentag, Niessen, & Zapf, 2010). Consequently, to avoid the aforementioned methodological issues longitudinal and multilevel field research needs to be conducted (e.g., diary studies; Bolger, Davis, & Rafaeli, 2003) that allows researchers to account for within-person variability in data analysis and reduce recall bias because the measurement of study variables occurs close to the conclusion of the event one intends to capture. A multilevel diary design acknowledges the hierarchical nature in which data sources are generally structured in organisational research (Snijders & Bosker, 2012). More specifically, a quantitative diary design entails that measurement occasions (e.g., within-day, daily, or weekly) are nested within individuals (Ohly et al., 2010). Such a research design acknowledges the interdependence between variables (e.g., leader behaviour) measured over time on several occasions (i.e., within-person variability) as well as the differences between the individuals that exhibit said behaviour (i.e., between-person variability; Kozlowski & Klein, 2000). This enables

the separation of variance that is due to the individual (e.g., a function of personality traits) and due to situational factors (e.g., supervisory behaviour whilst communicating performance feedback to an employee; Hoffman & Lord, 2013). In sum, a longitudinal, multilevel approach is required when conducting field research on leader behaviour and follower performance outcomes, which is why I conducted a diary study to examine the effects of leader emotional inconsistency on follower creative performance. To ensure that the field study has sufficient power I followed the recommendations by Scherbaum and Ferreter (2009) who propose a minimum sample size of 30 units at the highest level of analysis. As the diary study reported in Chapter 8 had a sample of 60 leader-follower dyads as the highest level of analysis, this amounted to double the minimum recommended sample size for multilevel research.

4.5 ETHICAL CONSIDERATIONS AND DATA PROTECTION

4.5.1 General Procedure

The data collection procedures for all studies reported in this thesis were in line with the APA ethical principles of psychologists and code of conduct (American Psychological Association, 2010). In addition to this, the research summarised in this thesis has received ethical approval from the Aston Business School Research Ethics Committee (reference number: 37/10:14). Generally, participation in all studies was voluntary and all participants were informed that they could drop out of the study at any point without providing a reason and without any negative impact on their module evaluation (i.e., for student participants) or their employment (i.e., for participating employees and managers). Each participant was thoroughly informed as to the background of the study including the advantages of participating in the research project. In regard to the field study, the research process was coordinated with Human Resources managers as well as the CEOs of the respective participating companies.

With regards to the experimental studies reported in Chapters 5 and 6, after giving informed consent participants were asked to indicate a four-digit code consisting of the second letter of the participant's mothers name, the third letter of his or her fathers name as well as the number of the month the participants was born in. This participant code was used to match pre- and post manipulation surveys of each participant. For the field study summarised in Chapter 8, I asked participants to create a so-called six-digit employee and manager code, respectively, which consisted of the employees initials and his or her year of birth. This enabled me to match employee responses with those of their respective manager as well as to ensure anonymity of respondents. Specifically, no names, departments, exact dates of birth or comparable data were collected as part of the study. As a result, the data collected ensured that no individual respondent could be tracked back based on his or her response.

Student participants in the experimental studies were debriefed in class and were provided with an overview of study results. Similarly, managers and employees of participating in the field study received a report detailing study results in an understandable way and without jargon. In addition, a workshop on effective nonverbal communication was delivered to both interested managers and employees of participating organisations. With regards to data storage, I adhere to the code of conduct published by Research Councils UK (2009), which prescribes to store data from studies for up to ten years, after which it will be destroyed.

CHAPTER 5:

THE TWO-FACED LEADER: THE EFFECTS OF LEADER EMOTIONAL INCONSISTENCY ON FOLLOWER CREATIVE PERFORMANCE

EXPERIMENT 1

5.1 CHAPTER SUMMARY

This chapter describes the conduct and analysis of an experimental study to examine the impact of leader displays of emotional inconsistency between happiness and anger on follower creative performance, as well as underlying mechanisms and boundary conditions of this relationship. Subjecting the research model of this thesis to an experimental test not only provides evidence towards its internal validity but also aids in establishing the directionality of effects under investigation. Drawing from the Emotions as Social Information theory (EASI; van Kleef, de Dreu, & Manstead, 2009), the chapter opens with a section dedicated to theory and hypothesis development. This is followed by a description of the methodological approach of this study including the study sample, the experimental task, as well as the manipulation employed. Next, the results are presented and study findings are discussed in light of their contribution to theory and practice.

5.2 THEORY AND HYPOTHESES

The conceptual model of the present study is depicted in Figure 5.1. Based on EASI theory (van Kleef, 2009), the following sections aim at developing hypotheses to the end of shedding light on the relationship between leader emotional inconsistency and follower creative performance. The theory section features a proposed application of EASI theory to the end of investigating inconsistent emotional expressions as well as a discussion on why the discrete emotions of happiness and anger were chosen to induce leader emotional inconsistency.

FIGURE 5.1
Conceptual Model for Experimental Study 1.
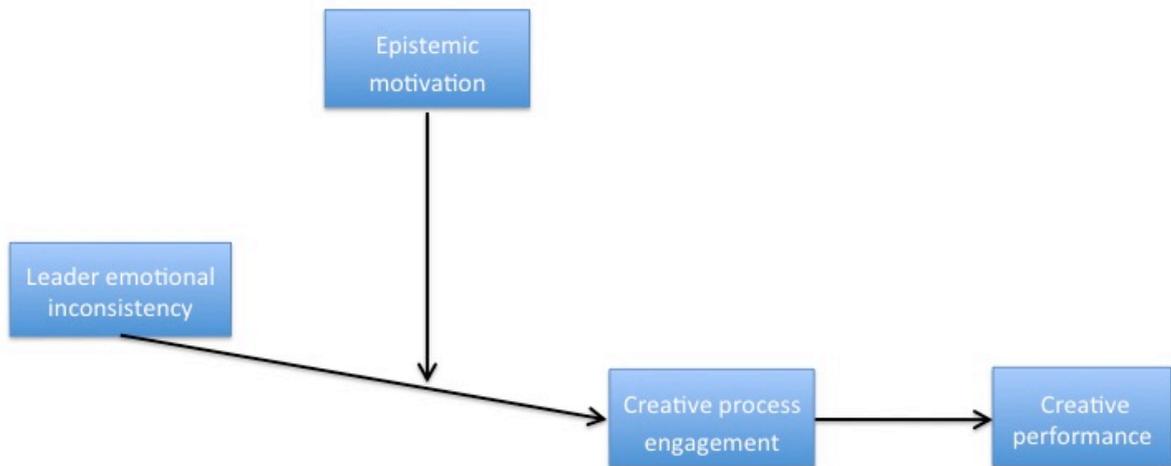
5.2.1 Leader Emotional Inconsistency

The present research focuses on leader emotional inconsistency, defined as *leader expressions that fluctuate between different discrete emotions over the course of a single encounter* (Frijda, 1986; Sinaceur et al., 2013). Fluctuation in this context means that emotional expressions oscillate between different discrete emotions over time, which according to emotion theorists is a rather typical phenomenon (Barrett, 2009). To date, one study investigated the effects of emotional inconsistency in a negotiation context (i.e., in a competitive interaction) which showed that opponents tend to concede more if a negotiator displays emotional inconsistency because such expressions induce a feeling of a lack of control in observers (Sinaceur et al., 2013). However, no research exists on the interpersonal effects of emotional inconsistency in a more cooperative setting such as a leader-follower relationship. The distinction between competitive and cooperative contexts is relevant because the repercussions of emotional influence can differ depending on the nature of the respective interaction (van Kleef et al., 2012). For example, whilst expressions of anger directed at an opponent in a competitive negotiation might lead to decreased concessions (Steinel, Van Kleef, & Harinck, 2008), expressions of anger in a cooperative leader-follower relationship

may lead to follower inferences of substandard performance and subsequent increased effort (e.g., van Kleef, Homan, et al., 2009). Therefore, I aim at investigating the effects of displayed emotional inconsistency in a cooperative leader-follower relationship.

I chose to investigate creative performance as the outcome of this study because it is an important indicator of organisational effectiveness that is particularly affect-driven (Baas et al., 2008) and has been shown to be influenced by leader emotional expressions (van Kleef et al., 2010; Visser et al., 2013).

To investigate the interpersonal effects of leader emotional inconsistency on follower creative performance, I draw from EASI theory (van Kleef, 2009). According to EASI theory, emotional expressions influence individuals by evoking affective reactions and triggering inferential processes, respectively. Emotional expressions can either be processed via the *affective reactions pathway* resulting, for example, in emotional contagion (i.e., catching another's emotion; van Kleef et al., 2012). In line with this, past research showed leader positive and negative mood to elicit corresponding follower affective states (Sy et al., 2005). Alternatively, when emotional expressions are processed via the *inferential processes pathway*, observers are provided with social information about the expresser, which can inform subsequent observer behaviour (Van Kleef et al., 2011). For example, research shows that leader expressions of anger (i.e., a typically negatively valenced emotion) can increase team performance if followers make performance inferences based on the emotional expression (e.g., leader anger can be interpreted as a signal of sub-standard performance; van Kleef, Homan, et al., 2009). What is more, EASI theory proposes boundary conditions that determine the relative precedence of affective reactions versus inferential processes when observing emotional expressions (van Kleef et al., 2012). These include factors influencing information processing depth such as observer levels of epistemic motivation (i.e., a desire to develop a rich and accurate understanding of situations;

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van Kleef et al., 2012). Following from this, observers with high levels of epistemic motivation are more likely to process emotional displays via the inferential processes pathway, whereas their low epistemic motivation counterparts tend to process emotional displays via the affective reactions pathway. Within the EASI framework, epistemic motivation as a construct is described as a motivation and ability to process information (van Kleef et al., 2012), however, this often conflicts with how it is mainly operationalised in research, that is, as an individual difference variable. Indeed, epistemic motivation is usually measured by assessing an individual's personal need for structure (PNS) with low PNS indicating high epistemic motivation and high PNS indicating low epistemic motivation (e.g., van Kleef, Homan, et al., 2009, van Kleef et al., 2010). Whilst EASI theory acknowledges that epistemic motivation is partly rooted in personality (van Kleef et al., 2012), the terminology used to describe an individual's predisposition to information processing (e.g., motivation, ability) does not clearly reflect how it is operationalised in research (e.g. as an individual difference factor). Henceforth within this thesis, I will adhere to the original terminology used by EASI theory (i.e., epistemic motivation), but at the same time emphasise that this construct reflects an individual's personal need for structure representing individual differences in information processing.

Despite the fact that EASI theory is an appropriate framework to explain the effects of leader emotional expressions on follower creativity, its main focus revolves around the explanation of how consistently displayed leader emotions such as happiness influence follower behaviours (van Kleef, 2014). However, emotional states in general and emotional expressions in particular are transient and consequently subject to change (Beal et al., 2005; Frijda, 1986; van Kleef et al., 2012), which allows for the possibility that two distinct discrete emotions can be expressed and observed in a single encounter (Sinaceur et al., 2013). Thus, the question becomes how the display of inconsistent emotions influences observers. I

propose, in line with EASI theory, that if observers process displays of emotional

inconsistency via the inferential processes pathway, the social information inferred

from inconsistent emotional expressions leads to cognitive reactions that can

ultimately influence follower behaviour. This stance is supported by social

psychology research showing that when complex and inconsistent information is

decoded via inferential processes, cognitive reactions are triggered, and individuals

are more action-oriented (Amit & Sagiv, 2013; Gocłowska et al., 2014). Conversely,

if observers process emotional inconsistency via the affective reactions pathway,

an additive effect is proposed, whereby the individual effects of emotional

expressions either accumulate (e.g., in the case of inconsistency regarding

emotions of the same valence such as anger and sadness) or cancel each other

out (e.g., in the case of inconsistency regarding emotions of opposite valences

such as happiness and anger). This proposition is in line with past research on the

effects of positively valenced emotional displays, for example showing that leader

expressions of pride and gratitude both lead to increases in follower job satisfaction

(i.e., the effects potentially accumulate when displayed inconsistently; Ritzenhöfer,

Brosi, Spoerrle, & Welpe, 2014). Conversely, when looking at the impact of

emotional expressions of opposite valences research showed leader expressions

of happiness to lead to increases in follower creativity (Visser et al., 2013),

whereas leader anger proved to be detrimental to follower creative ideation (van

Kleef, Anastasopoulou, & Nijstad, 2010), which is why I propose that these effects

potentially cancel each other out when displayed inconsistently.

Furthermore, according to EASI theory the observation of leader emotional

displays influences followers' feelings, attitudes, thoughts, and behaviours,

including creative behaviours (van Kleef et al., 2010, 2012). Whilst this theory-

based prediction on the effects of leader emotional expressions is sufficiently

broad, it lacks specificity with regards to the concrete underlying mechanisms

through which emotional expressions affect work outcomes such as creative

performance. Thus, I propose a distinct underlying mechanism that helps to explain the relationship between leader emotional inconsistency and follower creative performance: creative process engagement. Past research shows that follower creative process engagement can explain the effects of leader behaviour on follower creative performance (Henker et al., 2015; X. Zhang & Bartol, 2010a). What is more, creative process engagement is a necessary precondition for creative performance since individuals need to engage in solution generation, evaluation, and implementation to arrive at a meaningful creative output (X. Zhang & Bartol, 2010a).

The decision which discrete emotions to choose in order to display emotional inconsistency has substantial implications. Different discrete emotional expressions have differential effects on observer behaviour (van Kleef et al., 2012). Similarly, the effects of emotional inconsistency might change depending upon the choice of fluctuating discrete emotional expressions (Sinaceur et al., 2013). The present study will investigate fluctuations between happiness and anger to induce leader emotional inconsistency for several reasons. First, several scholars suggest that alternating emotional displays between happy and angry represents a typical case of emotional inconsistency (Frijda, 1986; Sinaceur et al., 2013). Second, happiness and anger are easily recognisable emotions (Russell & Barrett, 1999). Both reflect high levels of arousal and can be seen as their opposites in terms of valence (Russell, 1980). The inconsistent display of happiness and anger by leaders may increase creative performance in observers because such a display of high-intensity emotions of opposite valences is likely to come across as unconventional and violate observers' expectations, both of which have been associated with increased creativity (Gocłowska et al., 2014; Jaussi & Dionne, 2003).

To summarise, this study sets out to examine the effects of leader emotional inconsistency between happy and angry expressions in a cooperative

leader-follower relationship. Building on the EASI framework (van Kleef, 2009) it is argued in the following that contingent on followers' epistemic motivation, emotional inconsistency with regards to these two emotions affects their creative performance via creative process engagement.

5.2.2 Epistemic Motivation as a Moderator of the Leader Emotional Inconsistency – Creative Process Engagement Relationship

Creativity is generally defined as a process outcome (e.g., products, services) that is both novel and useful (Amabile, 1983). Several scholars criticised the sole investigation of creativity as a process outcome without considering the engagement in the creative process itself (Amabile & Mueller, 2008; Gilson & Shalley, 2004). For this reason, the current research investigates creative process engagement as an outcome of leader emotional inconsistency.

Based on EASI theory (van Kleef et al., 2012), I propose that followers with high- and low levels of epistemic motivation differ in their creative process engagement when they are exposed to leader expressions of emotional inconsistency because of their differing information processing capabilities. Epistemic motivation is defined as the desire to develop a rich and accurate understanding of situations (Kruglanski, 1989), which is why followers high on epistemic motivation engage in more thorough information processing and are more able to infer meaning from leader emotional expressions than their low epistemic motivation counterparts (Kruglanski & Webster, 1996; van Kleef et al., 2012). This study investigates leader displays of emotional inconsistency between the discrete emotions happiness and anger, both of which carry distinct social information (van Kleef et al., 2012). Past studies highlighted that followers with high levels of epistemic motivation infer from leader anger a dissatisfaction with current performance levels and a need for change (Sy et al., 2005; van Kleef et al., 2010). Inferences from leader happiness in turn may involve signals of satisfaction with

current performance levels (van Kleef, 2014; van Kleef, Homan, et al., 2009). Following from this, leader expressions of emotional inconsistency involving happy and angry displays could therefore send out social signals related to both happiness and anger, for example satisfaction and dissatisfaction regarding performance levels. For followers with high epistemic motivation these performance inferences may appear contradictory in that they disconfirm their initial expectations (e.g., happy displays convey satisfaction whereas subsequent angry displays send out opposite social signals). I propose that these contradictory social signals trigger divergent thought processes in followers with high levels of epistemic motivation resulting in increased creative process engagement. Lending support to this stance, social psychology research showed that if people or events are inconsistent and disconfirm observers' expectancies, their creative cognition increases in case observers have a low need for structure (akin to high epistemic motivation; Gocłowska et al., 2014). Conversely, followers with low epistemic motivation would not be able to infer social information from leader emotional expressions (Van Kleef et al., 2011). According to EASI theory, low-epistemic motivation followers would process leader displays of emotional inconsistency between happiness and anger via the affective reactions pathway (van Kleef et al., 2012). I hypothesise that in this case the impact of leader emotional inconsistency on followers would take the shape of an additive effect consisting of the independent effects of displays of happiness and anger. When processed via the affective pathway, past research showed a positive effect of leader happiness (Visser et al., 2013) as well as a negative effect of leader anger (van Kleef et al., 2010) on follower creativity. Thus, I expect that in the case of leader emotional inconsistency the respective positive effect of happiness and the negative effect of anger cancel each other out. Therefore, for followers with low epistemic motivation I propose that their creative process engagement remains unchanged after

observing leader displays of emotional inconsistency between happiness and anger.

Taken together, these arguments suggest that leader emotional inconsistency increases creative process engagement for followers with high as opposed to low levels of epistemic motivation.

Hypothesis 1: Follower epistemic motivation moderates the relationship between leader emotional inconsistency and follower creative process engagement, such that leader emotional inconsistency will be positively related to follower creative process engagement when follower epistemic motivation is high but will be unrelated when follower epistemic motivation is low.

5.2.3 The Moderated Mediating Role of Epistemic Motivation

Extending Hypothesis 1, I propose a moderated mediation model of leader emotional inconsistency and follower creative performance. Accordingly, leader emotional inconsistency is proposed to have a positive indirect effect on creative performance for followers with high levels of epistemic motivation through a positive effect of leader emotional inconsistency on follower creative process engagement as well as a positive effect of follower creative process engagement on follower creative performance. In line with this, greater leader emotional inconsistency will lead to cognitive reactions and an upsurge in divergent thought patterns for followers with high levels of epistemic motivation, increasing their creative process engagement and subsequent creative performance (Gocłowska et al., 2014; X. Zhang & Bartol, 2010a). In contrast, I argue that leader emotional inconsistency is unrelated to creative performance for followers with low levels of epistemic motivation due to the proposition that in this case the positive effect of leader happy displays and the negative effect of leader angry displays cancel each other out (van Kleef et al., 2010; Visser et al., 2013). Thus, leader emotional inconsistency will be unrelated to follower creative process engagement and

follower creative process engagement will be unrelated to follower creative performance for followers with low levels of epistemic motivation.

Hypothesis 2: For followers with high levels of epistemic motivation, creative process engagement mediates a positive relationship between leader emotional inconsistency and follower creative performance, whereas, for followers with low levels of epistemic motivation there is no relationship between leader emotional inconsistency and follower creative performance via follower creative process engagement.

5.3 METHODS

5.3.1 Sample and Design

The experimental sample consisted of 94 students from UK-based business school. The study adopted a 2 (Emotional inconsistency: constant emotions vs. alternating emotions) x 2 (Last expression: anger vs. happiness) between subjects design (Sinaceur et al., 2013). Participants were randomly assigned to each of the conditions. Before participants received the emotional inconsistency manipulation, a continuous measure of epistemic motivation was administered, which serves as moderating variable in this research. All study materials are available upon request.

5.3.2 The Task

The experimental task was an ideation task and required individuals to think of as many ways as possible to use a potato. This is a modified version of the widely used "brick task"(Lamm & Trommsdorff, 1973), which has been used in previous research on leader emotional expressions and creativity (van Kleef et al., 2010). The ideation task ties in with the overall narrative for participants, which is to aid a manager of a marketing agency in an advertising campaign to promote genetically modified potatoes. After participants completed the idea generation

task, they completed another questionnaire including a measure of creative process engagement, which serves as mediating variable in this research.

5.3.3 Procedure

The experiment was framed as a practical exercise within the scope of an undergraduate module in a UK-based business school. On arrival, participants were seated in a room where an administrator blind to the experimental conditions provided them with instructions for the upcoming session. All participants of a respective condition were tested simultaneously, however they were seated individually (i.e. one at each table) and the administrator additionally emphasized the individual character of the task. After giving informed consent and completing a pre-task questionnaire assessing epistemic motivation the participants received the instruction that they are supposed to contribute to a marketing campaign by "Innovate Inc.", a marketing agency developing marketing strategies for many Fortune 500 companies. They were informed that one of Innovate´s senior managers, Carl Smith, is working on a project for the world´s biggest chemical company in order to advertise their genetically modified potatoes that are e.g. more resistant to common potato diseases. Participants were told that Carl will brief them via a live video stream on what their task involves during the session. The live video steam was displayed on a large screen using a projector. After this introduction, participants received the experimental manipulation.

5.3.4 Manipulation of Emotional Inconsistency

I manipulated emotional inconsistency by showing participants leader emotional expressions of happiness and anger displayed either consistently or inconsistently. I ensured that possible effects can neither be attributed to the consistent display of a discrete emotion, nor to arousal effects since selecting two high-arousal emotions such as happiness and anger controls for this (Venus et al.,

2013). More specifically, participants saw a pre-taped video of a fictitious leader briefing participants on the aforementioned project. In the video, the leader introduces himself to participants mentioning that in 2000 he graduated from their business school with an MBA in management and still kept in touch with the university since then. He then explains that he is currently developing a marketing campaign for the world´s biggest chemical company. Eventually, the leader outlines what students need to do during the session. In order to assist him in this project, participants need to come up with as many ways as possible to use a potato. The leader concludes that student suggestions will potentially be used for a TV advertisement to promote genetically modified potatoes. The emotional tone of the four videos was either consistently happy or angry, or inconsistent (happy-angry or angry-happy). In videos displaying inconsistent emotions, emotional transitions between happy to angry or angry to happy occurred three times. Generally, leader emotions were manipulated by variations in facial expressions (smile or frown), tone of voice (pleasant or unpleasant), and body language (e.g. clenching of the fist or raising thumbs to express happiness; van Kleef, Homan, et al., 2009; Visser et al., 2013). Practically, 48 students were randomly assigned to the consistent emotion condition (i.e. 25 students in the consistent happy displays / 23 students in the consistent angry displays condition) and 46 students to the inconsistent emotions condition (i.e. 22 students in the inconsistent happy-angry / 24 students in the inconsistent angry-happy condition). In both conditions, the speech text of the leader was exactly the same to avoid that the effect of emotional displays is confounded with task feedback. In addition, the order of emotional inconsistency (i.e. happy-angry or angry-happy) was accounted for by controlling for the leader´s last emotional expression (happy or angry; see below).

5.3.5 Control for Last Emotional Expression

This second experimental factor controls for valence and order of leader emotional displays. This is relevant because the leader's speech involves four emotion-laden passages, which in the consistent condition results in happy-happy-happy-happy or angry-angry-angry-angry displays as well as in the inconsistent condition in happy-angry-happy-angry or angry-happy-angry-happy displays. Dependent on the last respective emotional expression displayed by the leader (i.e. message either ending with happy or angry emotional expressions) participants were in one of the two conditions (Last expression: happy vs angry; Sinaceur et al., 2013).

5.3.6 Measures

The administered pre-and post surveys can be found in Appendix A and B, respectively. The measurement scales used along with their sources have additionally been listed under Appendix G.

Creative Performance. Creative performance was assessed by means of fluency, originality, and flexibility, representing the most common conceptualisations of creative performance in research on leadership and creativity (Reiter-Palmon & Illies, 2004). Fluency was measured by counting the number of non-redundant ideas generated by participants (Runco, 1999). Originality was assessed by computing the relative frequency of an idea in the general idea pool and creating an infrequency score (Reiter-Palmon & Illies, 2004). This was achieved by following the approach of Baas et al. (2014) and assigning a percentage score to each idea (e.g. if 30% of participants mentioned an idea, it received score 30). The higher the number assigned to an idea, the less original (more frequent) it was. The percentage score was then subtracted from 100 to arrive at an infrequency measure where a higher score indicated a more original (less frequent) idea. Finally, flexibility was measured by counting the number of

distinct semantic categories a participant accessed. The more categories a participant accessed, the higher was his/her flexibility score (Runco, 1999). An independent coder counted all non-redundant ideas (i.e. fluency), computed an infrequency score (i.e. originality), as well as assigned semantic categories to each idea (i.e. flexibility). In regard to flexibility, a semantic system comprised of forty-five semantic categories emerged from this process. A second coder received the list of semantic categories created by the first coder and re-evaluated 100% of the idea pool to confirm the accuracy of previous ratings of fluency, originality, and flexibility. With regards to fluency, the second rater arrived at the exact same number of non-redundant ideas per participants than the first rater. In addition, interrater reliability coefficients for originality (τ = .87) and flexibility (κ = .77), confirm that there was substantial agreement amongst raters (Landis & Koch, 1977; LeBreton, Burgess, Kaiser, Atchley, & James, 2003). Both raters were blind to the experimental conditions. Finally, as I was not interested in individual creativity facets, I followed recommendations by Runco et al. (1987) and computed an overall creative performance summation score by z-standardising fluency, originality, and flexibility scores and summing them up (see Carson, Peterson, & Higgins, 2003 for a similar approach). There is no substantial difference in creative performance results under section 5.4.4 when reported as individual creativity facets or as a creative performance summation score.

Creative Process Engagement. Creative process engagement was measured by six items from an eleven-item scale developed by Zhang and Bartol (2010). Following the approach of To et al. (2012) those six items were chosen out of the original scale that would logically be expected to vary over the short term (e.g. as a reaction to leader emotional expressions). A sample item is "I tried to devise potential solutions that move away from established ways of doing things". The items were scored on a 5-point rating scale, ranging from 1=not at all to 5= very frequently. The scale proved to be reliable (α = .86).

Epistemic Motivation. Epistemic motivation was measured by a 11-item need for structure scale (Neuberg & Newsom, 1993). A sample item is "It upsets me to go into a situation without knowing what I can expect from it". The items were scored on a 5-point rating scale, ranging from 1=strongly disagree to 5= strongly agree. The scale was reliable (α = .82). Based on the approach of van Kleef et al. (2010), in order to facilitate the interpretation of findings, the responses were recoded so that higher scores reflect higher epistemic motivation. Specifically, low scores on the need for structure scale have been recoded to reflect high levels of epistemic motivation, whereas high need for structure scores reflect low levels of epistemic motivation.

5.3.7 Manipulation Checks

Leader Display of Emotional Inconsistency. Following the approach of previous research e.g. Sinaceur et al. (2013), perceived leader emotional inconsistency was measured with three items on a 7-point rating scale, ranging from 1=not at all to 7= very much. A sample item is "To what extent did the leader appear changing?". The scale proved to be reliable (α = .80).

Last expression. Based on past research by Sinaceur and colleagues (2013) participants rated how much anger and happiness the leader expressed at the end of the briefing session via a one-item measure. The item is "How much did the leader express happiness / anger at the end of the video?". Participants will further rate how much anger and happiness the leader expressed throughout the entire briefing session via a one-item measure. The item is "How much did the leader express happiness / anger in the video in general?". The latter measures will serve as control variables for the last expression check analyses. All items were scored on a 7-point rating scale, ranging from 1=Not at all to 5= Very much. Due to the fact that the last expression manipulation check was assessed with single items, no reliability scores can be reported.

5.4 RESULTS

5.4.1 Manipulation Check Results

Emotional Inconsistency. In order to check whether the emotional inconsistency manipulation was successful, the inconsistency scale was submitted to a 2 (Emotional inconsistency: constant emotions vs alternating emotions) x 2 (Last expression: anger vs happiness) ANOVA. Participants assigned to the emotional inconsistency condition thought that the leader came across as more inconsistent (M= 4.27, SD= 1.70) than did the participants in the emotional consistency condition (M= 2.83, SD= 1.33; F(1,90)= 21.95, p <.001; η^2 = .19). Thus, leader emotional inconsistency was successfully manipulated. There were no other effects.

Last Expression. Furthermore, the anger last expression check was submitted to a 2 (Emotional inconsistency: constant emotions vs. alternating emotions) x 2 (Last expression: anger vs. happiness) ANCOVA. In line with previous research, the ANCOVA controlled for anger expressed overall throughout the video stream to ensure that results do not merely reflect participant perceptions of leader emotions prior to the last expression (Sinaceur et al., 2013). Participants in the angry last expression condition thought that the leader expressed more anger at the end (M= 4.56, SD= 2.47) than did participants in the happy last expression condition (M= 1.86, SD= 1.34; F(1,89)= 11.29, p <.001; η^2 = .05). Apart from this, there was a main effect of anger perceived throughout the video stream on anger perceived at the end of the video stream (F(1,89)= 126.75, p <.001; η^2 = .55). There were no other effects. Similarly, the happiness last expression check was submitted to a 2 (Emotional inconsistency: constant emotions vs. alternating emotions) x2 (Last expression: anger vs. happiness) ANCOVA controlling for happiness expressed throughout the video stream. Participants in the angry last expression condition thought that the leader expressed less happiness at the end

(M= 3.04, SD= 2.03) than did participants in the happy last expression condition

(M= 5.00, SD= 1.58; F(1,89)= 6.59, p <.05; η^2 = .04). Moreover, there was a main

effect of happiness perceived throughout the video stream on happiness perceived

at the end of the video stream (F(1,89)= 77.55, p <.001; η^2 = .43). There were no

other effects. Therefore, the last expression manipulation was successful.

5.4.2 Analytical Strategy

Hypothesis 1 and 2 were tested using the path modelling capabilities of

Mplus Version 7 (Muthén & Muthén, 1998-2012). From a methodological

perspective, I implemented recommendations by Hayes and Preacher (2014) on

statistical analyses using a multicategorical independent variable. This is because

the premise of statistical analyses changes in case independent variables (IVs) are

comprised of several categories as it is often the case in experimental research

(Hayes & Preacher, 2014). In such a case, statistical analyses would investigate

the impact of mean differences between certain categories of interest on an

outcome variable whilst controlling for the remaining categories of the

multicategorical IV that are not of interest in the respective examination (i.e., other

relative effects that are part of the total effect of the IV on the outcome; Hayes &

Preacher, 2014). This approach enabled me to create specific dummy variables to

model the impact of mean differences of all three of my experimental categories

(i.e., inconsistent emotions, happiness, and anger) whilst controlling for both the

respective experimental category a specific analysis was not designed to examine

(e.g., the relative effect of the mean difference between leader happiness and

anger or vice versa on the outcome variable) as well as the last emotional

expression (e.g., as a means to ensure that the order of inconsistency does not

influence study results).

Therefore, to test Hypothesis 1 I ran two separate analyses that were designed to test the effects of an interaction between mean differences between leader happiness vs. inconsistent emotional expressions and follower epistemic motivation on creative process engagement as well as the same analysis investigating mean differences of leader anger vs. inconsistent emotional expressions. I did this to avoid a conflation of effects in hypothesis testing, which would occur when contrasting the consistent emotional expressions of happiness and anger simultaneously with inconsistent expressions (see Sinaceur et al., 2013 as an example of conflated effects). More specifically, following the recommendations by Hayes and Preacher (2014) for both of my analyses I used indicator coding to create two dummy variables (D1 and D2) each representing a mean difference test between two experimental categories with a predetermined control group. For the first set of analyses, I assigned leader happiness as the control group. D1 (contrast coded as 0 for leader happiness and 1 for inconsistent leader emotions) thus represented the impact of the mean difference between leader happiness and leader inconsistent emotional expressions on creative process engagement, whereas D2 (contrast coded as 0 for leader happiness and 1 for leader anger) reflected the impact of the mean difference between leader happiness and leader anger on creative process engagement. For the second set of analyses, I assigned leader anger as the control group. Here, D1 (contrast coded as 0 for leader anger and 1 for inconsistent leader emotions) represented the impact of the mean difference between leader anger and leader inconsistent emotional expressions on creative process engagement. D2 (contrast coded as 0 for leader anger and 1 for leader happiness) reflected the impact of the mean difference between leader anger and leader happiness on creative process engagement. With regards to both sets of analyses, I added mean-centred follower epistemic motivation and the interaction terms between D1 and epistemic motivation as well as D2 and epistemic motivation to the model to control for the

relative interaction effect of D2 with epistemic motivation (see Hayes & Preacher, 2014 for a detailed description of the role of relative effects in the context of statistical analyses involving multicategorical IVs). Similarly, in both sets of analyses I controlled for the last expression by additionally including a dummy variable (contrast coded 0 for happiness and 1 for anger last expressions).

To test the moderated mediation model proposed by Hypothesis 2, I employed path modelling including bias-corrected bootstrapping procedures (Edwards & Lambert, 2007; Hayes, 2015; Preacher, Rucker, & Hayes, 2007). Proof for moderated mediation is obtained if the bias-corrected confidence interval does not contain zero (Hayes, 2015). Regarding the number of resamples required for bootstrapping, relevant literature points towards a minimum of 1000 resamples, with more yielding more accurate results (Edwards & Lambert, 2007; Preacher & Hayes, 2008). Thus, the present study follows the approach of Hayes (2015) using 10000 bootstrap resamples. In order to perform a moderated mediation analysis including a multicategorical IV I extended the methodological recommendations by Hayes and Preacher (2014), which solely described mediation analyses. My methodological approach to test Hypothesis 2 therefore combines recommendations made by Hayes and Preacher (2014) on mediation with a multicategorical IV with recommendations by Preacher et al. (2007) on moderated mediation (I have verified the appropriateness of my approach including the Mplus syntax used with Preacher, personal communication, July 23, 2016). Similar to my approach to testing Hypothesis 1, I ran two sets of moderated mediation analyses (i.e., dependent on the respective control group being leader happiness or anger). I computed D1 and D2 as described above and included them along with mean-centred follower epistemic motivation as well as their two interaction terms and the last expression dummy (contrast coded 0 for happiness and 1 for anger) into the a-path of the model predicting creative process engagement. In regard to the b-path of the model, I entered mean-centred creative process engagement as a predictor

of the outcome variable creative performance (i.e., a summation score consisting of

z-standardised scores of fluency, originality, and flexibility as previously described

in section 5.3.6; Carson et al., 2003; Runco et al., 1987).

5.4.3 Results for Creative Process Engagement

Hypothesis 1 stated that follower epistemic motivation moderates the

relationship between leader emotional inconsistency and follower creative process

engagement. Results of path analyses are presented in Table 5.1. In the following,

results are reported for analyses contrasting leader happiness vs. leader

inconsistent emotions (i.e., leader happiness being the control group), followed by

analyses contrasting leader anger vs. leader inconsistent emotions (i.e., leader

anger being the control group).

In line with Hypothesis 1, I found that the interaction between leader

emotional inconsistency (contrast coded as 0 for leader happiness and 1 for

inconsistent leader emotions) and follower epistemic motivation significantly

predicted follower creative process engagement (β = .59, p <.01). To explore the

pattern of this interaction simple slope analyses were conducted (Aiken & West,

1991). Analyses showed that the simple slope for participants with high epistemic

motivation was significant and positive (+1SD, β = 1.07, t = 3.45, p <.01) indicating

that participants with high epistemic motivation exhibited greater creative process

engagement after the leader expressed emotional inconsistency rather than

happiness. The simple slope for participants with low epistemic motivation, on the

other hand, was non-significant and negative (-1SD, β = -.10, t = -.33, *ns.*), showing

that participants low in epistemic motivation experience no significant benefit

regarding their creative process engagement from emotionally inconsistent leaders.

Furthermore, in a second set of analyses I also found a significant

interaction between leader emotional inconsistency (contrast coded as 0 for leader

anger and 1 for inconsistent leader emotions) and follower epistemic motivation

predicting follower creative process engagement (β = .72, p <.01). Simple slope

tests (Aiken & West, 1991) revealed that the slope for participants with high

epistemic motivation was significant and positive (+1SD, β = 1.38, t = 4.14, p <.001)

indicating that high epistemic motivation participants exhibited greater creative

process engagement after the leader expressed emotional inconsistency rather

than anger. The simple slope for participants with low epistemic motivation, on the

other hand, was non-significant and negative (-1SD, β = -.06, t = -.18, *ns.*), showing

that participants low in epistemic motivation experience no significant benefit

regarding their creative process engagement from emotionally inconsistent leaders

over angry leaders. These results provide support for Hypothesis 1. The interaction

effects are illustrated in Figure 5.2 and Figure 5.3.

FIGURE 5.2
Moderating Effect of Epistemic Motivation on the Relationship between
Leader Emotional Inconsistency (0= Leader Happiness, 1= Leader Emotional
Inconsistency) and Creative Process Engagement
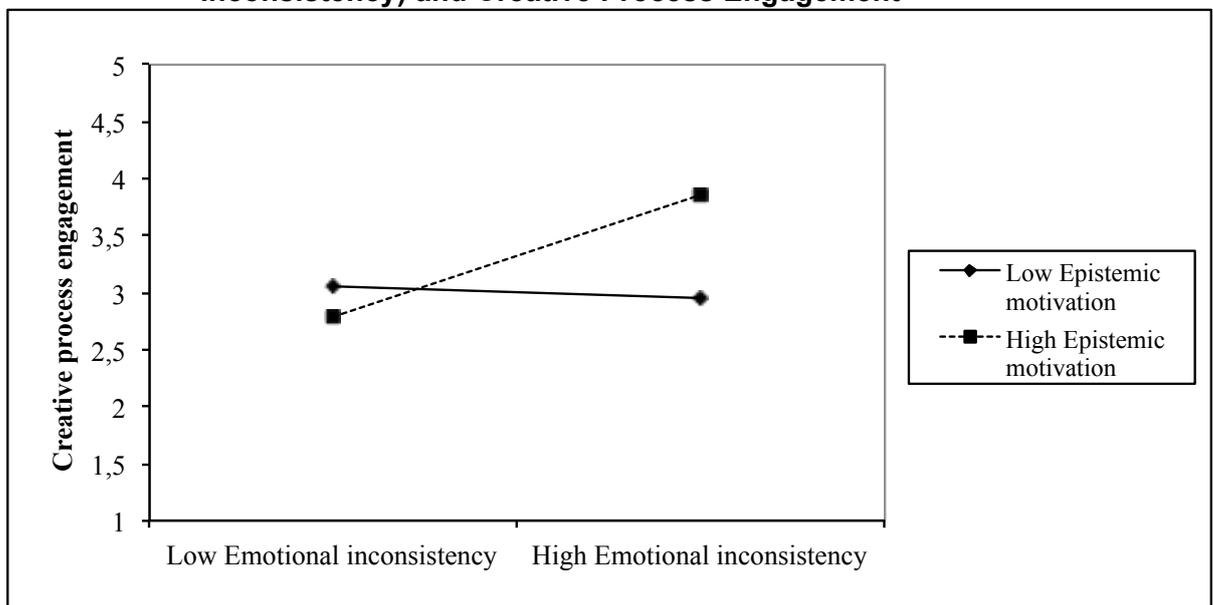
FIGURE 5.3
**Moderating Effect of Epistemic Motivation on the Relationship between
Leader Emotional Inconsistency (0= Leader Anger, 1= Leader Emotional
Inconsistency) and Creative Process Engagement**
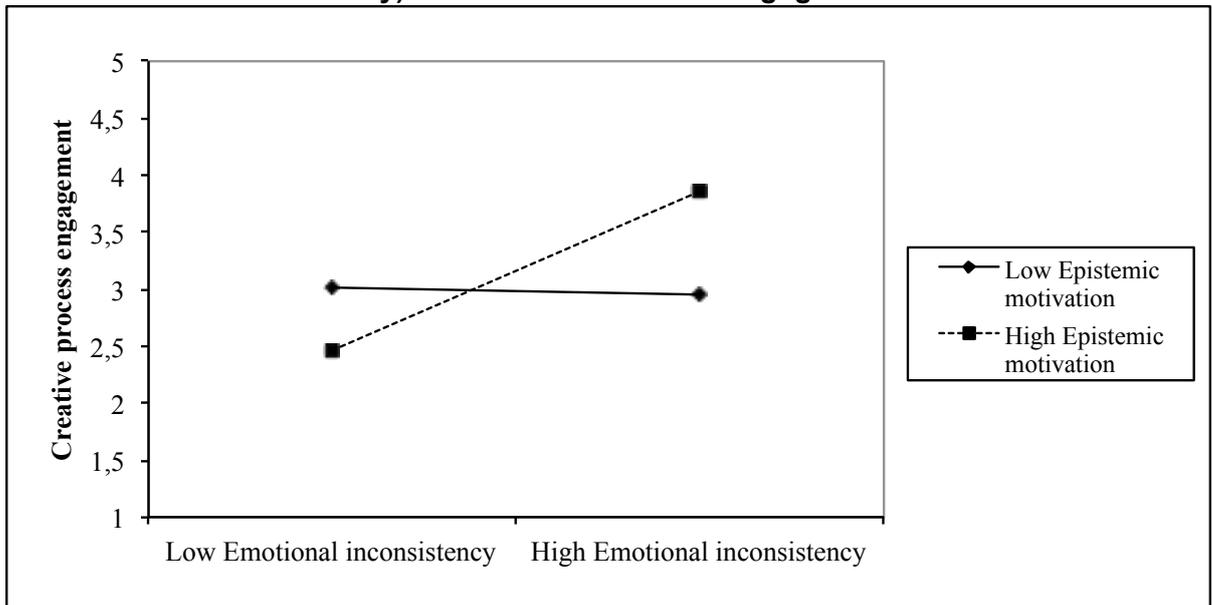
TABLE 5.1
**Results of Path Analyses of Leader Emotional Inconsistency (vs. Leader
Happiness and Leader Anger) and Creative Process Engagement**

Predictor	Leader happiness as control group				Leader anger as control group			
	B	*SE*	*t*	*R²*	*B*	*SE*	*t*	*R²*
Leader emotional inconsistency (D1)	.48	.24	2.04*		.67	.25	2.67**	
Leader consistent emotions[1] (D2)	-.18	.34	-.53		.18	.34	.53	
Leader emotional inconsistency x epistemic motivation	.59	.22	2.66**		.72	.21	3.40**	
Leader consistent emotions x epistemic motivation	-.13	.26	-.51		.13	.26	.51	
Follower epistemic motivation	-.13	.19	-.69		-.26	.18	-1.48	
Last expression	-.19	.24	-.76		-.19	.24	-.76	
				.26**				.26**
n				94				94

*$p < .05$

**$p < .01$

[1]= Leader consistent emotions refer to the respective other consisent emotional expression than the one in the control group e.g., D2 refers to leader anger (happiness) when the control group is leader happiness (anger).

5.4.4 Results for Creative Performance

Hypothesis 2 proposed that epistemic motivation moderates the relationship between leader emotional inconsistency and follower creative performance (conceptualised as a z-standardised summation score of fluency, originality, and flexibility; Runco et al., 1987) via follower creative process engagement. Similar to my approach to reporting results above, I initially present results for analyses contrasting leader happiness vs. leader inconsistent emotions (i.e., leader happiness being the control group), followed by analyses contrasting leader anger vs. leader inconsistent emotions (i.e., leader anger being the control group).

Moderated mediation analysis results for the contrast between leader happiness and leader emotional inconsistency showed that there was a significant moderated mediation effect for followers with high (conditional indirect effect: .36; 95% CI Low = .148; CI High = .689), but not low (conditional indirect effect: -.04; 95% CI Low = -.264; CI High = .211) levels of epistemic motivation.

Similarly, moderated mediation analysis results for the contrast between leader anger and leader emotional inconsistency revealed a significant moderated mediation effect for followers with high (conditional indirect effect: .466; 95% CI Low = .182; CI High = .930), but not low (conditional indirect effect: -.018; 95% CI Low = -.199; CI High = .254) levels of epistemic motivation.

Overall, the results lend support to Hypothesis 2 predicting that leader emotional inconsistency increases follower creative performance for employees with high (but not low) levels of epistemic motivation via increases in follower creative process engagement. In other words, followers that are able to decode the social information conveyed by leader emotional expressions (i.e., high epistemic motivation followers) benefitted most from leader emotional inconsistency by way of increased creative process engagement, and subsequent creative performance.

5.5. DISCUSSION

I examined how and when leader displays of emotional inconsistency between happiness and anger influenced follower levels of creative performance. Furthermore, in follower epistemic motivation (i.e., as an indication of information processing capability; van Kleef et al., 2012) I identified a boundary condition of the relationship between leader emotional inconsistency and follower creative process engagement. Moreover, I investigated the mediating role played by creative process engagement in explaining how displayed emotional inconsistency can boost creative performance for followers with high epistemic motivation. Researchers have previously investigated displays of emotional inconsistency in a competitive negotiation context and reported that this leads to observers' increased concession-making (Sinaceur et al., 2013). I extended this literature and applied it to a more cooperative context: the leader-follower relationship. Based on EASI theory (van Kleef, de Dreu, et al., 2009) I predicted and found that followers who are able to decode the social information inherent in emotional inconsistency between happiness and anger (i.e.; high epistemic motivation followers) benefit from such leader displays. Specifically, I reported that said benefit takes the shape of increased levels of creative process engagement. Furthermore I showed that these favorable effects on creative process engagement eventually lead to an upsurge in subsequent creative performance. I discuss these findings as well as their implications for future research and practice below.

5.5.1 Theoretical Implications

My findings extend previous research and theorizing about how leader emotional displays impact followers by incorporating theory related to inconsistent emotions. By doing so I have highlighted that only considering consistently displayed emotions such as happiness or anger individually fails to fully capture the reality of leader-follower interactions. Indeed, I made the case that displayed

emotions can fluctuate between different discrete emotions as part of the leadership process, which I believe is a more realistic approximation to how emotional leadership is enacted. In addition, I show that leader displays of emotional inconsistency can positively contribute to relevant work-related outcomes. Notably, my research makes three key theoretical contributions.

First, my most general contribution is that I provide an application of EASI theory (van Kleef, de Dreu, et al., 2009) that explains how the display of inconsistent emotions affects observers in a cooperative leader-follower setting. Given that past research on the impact of leader emotional displays on follower outcomes has merely considered the effects of consistently displayed emotional expressions such as happiness (Visser et al., 2013) or anger (van Kleef, Homan, et al., 2009) I highlight the potential contribution inconsistent emotional displays can make to leadership practice and establish internal validity for this claim. Generally, the findings from my study emphasize the need for research to rethink how to conceptualize emotional leadership and to embrace a more dynamic, inconsistent approach to leader emotion research instead of the prevalent viewpoint of emotional consistency.

My second contribution concerns the effects of leader emotional inconsistency. My study provides the first empirical test of the effects of emotional inconsistency between happiness and anger within the scope of a leader-follower relationship and identifies a crucial boundary condition in this respect. Specifically, I demonstrated that leader emotional inconsistency is associated with increased creative process engagement, however, only for followers with high levels of epistemic motivation (i.e., those who were able to decode the social information conveyed by inconsistent emotions).

My third contribution relates to the development of a theoretical model to explain the effects of leader emotional inconsistency on follower creative performance. Based on EASI theory (van Kleef, 2009) I identified a mediating

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mechanism that links leader emotional inconsistency to creative performance for followers with high levels of epistemic motivation: creative process engagement. Creative process engagement has previously also been investigated as a predictor of relevant work-related outcomes other than creative performance e.g. in-role performance (X. Zhang & Bartol, 2010b). Thus, my research provides a theoretical basis for the current investigation but could similarly act as a framework for future research on emotional inconsistency in leader-follower relationships.

Methodologically, my approach to data analysis building on the experimental design of Sinaceur et al. (2013) could equally act a framework for future researchers on how to examine the effects of leader emotional inconsistency on follower work-related outcomes compared to a chosen control condition. More specifically, the Mplus code that was developed as part of this study allows for the investigation of moderated mediation models with experimental data that could be operationalised as a multicategorical independent variable (Hayes & Preacher, 2014; Preacher et al., 2007).

5.5.2 Practical Implications

My research has various implications for organizational practice. First, managers can be trained to display effective emotional leadership tactics to spark employee creativity. Specifically, managers can attempt to alter their own emotional leadership style to match their respective employees' preferences as well as information processing capabilities. For example, for employees with reduced information processing capabilities (i.e. low epistemic motivation individuals) the consistent display of happiness may yield better results when attempting to increase their work performance (van Kleef, Homan, et al., 2009) or creativity (Visser et al., 2013). HR professionals could develop leadership development trainings to support leaders in this process.

Relatedly, due to the fact that epistemic motivation can also be undermined by environmental factors such as fatigue (van Kleef et al., 2012) managers and HR professionals can implement changes regarding their organizational work climate or culture to counteract this negative influence. For example, leaders could encourage employees to more autonomously take breaks (Trougakos, Hideg, Cheng, & Beal, 2014) and to mentally switch off work during off-job time (Sonnentag, Binnewies, & Mojza, 2010) to reduce employee fatigue.

5.5.3 Limitation and Directions for Future Research

The results from my enquiry also raise questions for future research. Whilst it is a strength of my research design and analytical approach that I was able to compare the effects of leader emotional inconsistency with leader happiness as well as leader anger individually, research designs of prior studies on consistent leader emotions and follower creativity also included leader neutral expressions as an additional control group (van Kleef et al., 2010; Visser et al., 2013). Thus, future research could aim at replicating my results by examining the impact of leader emotional inconsistency between happiness and anger on follower creative performance compared to leader neutral expressions.

Second, the intensity with which individual emotions are displayed may also impact how emotional inconsistency is perceived (van Kleef et al., 2012). Past research shows that especially the intensity of angry expressions can affect how negative observer responses will be (Gibson & Callister, 2009). Thus, it might be useful to explore how various intensity levels of individually expressed emotions (e.g., happiness and anger) affect the general perception of emotional inconsistency between happiness and anger.

5.5.4 Conclusion

This study provides the first examination of the benefits of leader displays of emotional inconsistency between happiness and anger and my findings demonstrate that such emotional leadership practices can be useful to spark the creative performance of followers. This initial test of leader emotional inconsistency confirms predictions made by theories on the social-functional role of emotions by highlighting the role of follower epistemic motivation in decoding social information conveyed by leader emotional expressions (e.g., van Kleef et al., 2012). What is more, I showed that creative process engagement further helps explain how leader emotional inconsistency eventually boosts the creative performance of followers. I believe that it is crucial for future research to acknowledge the dynamic nature of emotional leadership. Putting leader emotional inconsistency on the research agenda may therefore be a first step towards fully understanding the true impact emotions have on organizational behavior.

The experimental study reported in this chapter provided initial evidence for the research model put forward by this thesis. With the aim of adhering to constructive replication (i.e., research that tests the same hypotheses amongst the same theoretical constructs with different operationalisations; Lykken, 1968), the following chapter summarises a replication study with a different type of experimental manipulation of leader emotional inconsistency. Specifically, whilst the aforementioned experiment used videos to manipulate leader emotional expressions, the subsequent chapter reports a study using a scenario-type manipulation of leader displays of emotion. Generally, constructive replication efforts strengthen confidence in the validity of the hypothesised relationships and are therefore indispensable for scientific progress (Eden, 2002).

CHAPTER 6:

THE TWO-FACED LEADER: THE EFFECTS OF LEADER EMOTIONAL INCONSISTENCY ON FOLLOWER CREATIVE PERFORMANCE

EXPERIMENT 2

6.1 CHAPTER SUMMARY

This chapter reports the conduct and analysis of an experimental study that replicates the research model described in Chapter 5. Thus, it aims at investigating the impact of leader displays of emotional inconsistency between happiness and anger on follower creative performance, as well as at examining creative process engagement as underlying mechanism and epistemic motivation as boundary condition of this relationship. The research model is depicted in Figure 6.1. The sole difference between both experimental studies is that they differ with regards to the type of experimental manipulation that was employed. More specifically, whilst the study reported in the previous chapter employed a video manipulation of leader emotional expressions, the present experimental study uses a scenario-type manipulation of leader emotional expressions (Aguinis & Bradley, 2014). A replication study of the research model presented in Chapter 5 using a different type of experimental manipulation is useful in that it provides greater confidence with regards to both the internal validity as well as the directionality of the study findings. Since the present study both employs the identical research design as well as it tests the same hypotheses as the study reported in Chapter 5, this chapter opens with a section dedicated to methodology followed by a discussion of study findings. Chapter 6 closes with a consideration of theoretical and practical contributions of the study findings as well as future research directions.

FIGURE 6.1
Conceptual Model for Experimental Study 2.
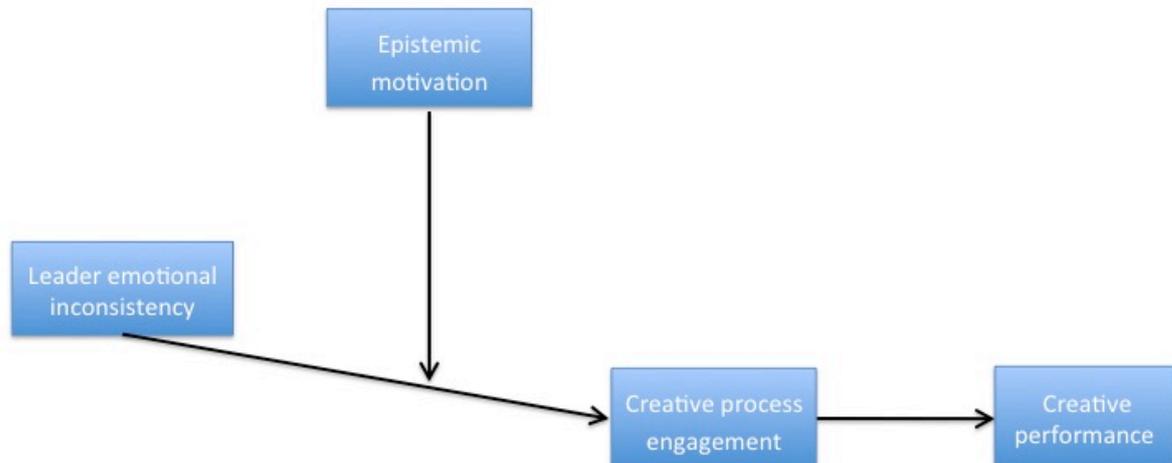
6.2 METHODS

6.2.1 Sample, Design, and Task

The sample consisted of 81 students from a UK-based business school. The experimental design as well as the task was the same as in the study reported in Chapter 5.

6.2.2 Procedure

The same procedure was used as in the study reported in Chapter 5 with the sole modification that instead of being told that they will receive leader instructions via a live stream, study participants were informed that they would receive written instructions by their leader Carl Smith (i.e., reflecting a scenario-type manipulation).

6.2.3 Manipulation of Emotional Inconsistency

The scenario manipulation of emotional inconsistency consisted of presenting participants with the speech text featured in Chapter 5 combined with emotion-laden pictures of the fictitious leader to increase the manipulation's degree of realism (see Aguinis & Bradley, 2014 for methodological recommendations). In line with the research design described in Chapter 5, the emotional tone of the four

scenarios was either happy or angry, or inconsistent (happy-angry or angry-happy). Specifically, the respective speech text was placed next to the emotion-laden picture of the leader. In addition to this, a short description of the leader's emotional tone was placed before the speech text to further illustrate the leader's emotional expression, namely *Carl Smith (in a happy/angry way)*. Practically, 37 students were randomly assigned to the consistent emotion condition (i.e., 20 students in the consistent happy displays / 17 students in the consistent angry displays condition) and 44 students to the inconsistent emotions condition (i.e., 22 students in the inconsistent happy-angry / 22 students in the inconsistent angry-happy condition).

6.2.4 Control for Last Emotional Expression

Similar to my approach reported in the previous chapter, in the scenario experiment I controlled for valence and order of leader emotional displays by assigning participants to one of two last expression categories (happy vs. angry; Sinaceur et al., 2013).

6.2.5 Measures

The administered pre-and post surveys can be found in Appendix A and B, respectively. The measurement scales used along with their sources have additionally been listed under Appendix G.

Creative Performance. Two independent coders who were blind to the experimental conditions rated 100% of the participants' idea pool for creative fluency, originality, and flexibility. With regards to fluency, the second rater arrived at the same number of non-redundant ideas per participant as the first rater (i.e., 100% agreement). In addition, interrater reliability coefficients for originality (τ = .93) and flexibility (κ = .90), confirm that there was near-perfect agreement amongst raters (Landis & Koch, 1977; LeBreton et al., 2003). Following

recommendations by Runco et al. (1987), I computed an overall creative

performance summation score by z-standardising fluency, originality, and flexibility

scores and summing them up (see Carson, Peterson, & Higgins, 2003 for a similar

approach). There is no substantial difference in creative performance results under

section 6.3.4 when reported as individual creativity facets or as a creative

performance summation score.

Other Measures. I used the same items as reported in Chapter 5 to assess

follower creative process engagement (α = .79; To, Fisher, Ashkanasy, & Rowe,

2012; Zhang & Bartol, 2010), and epistemic motivation (α = .78; Neuberg &

Newsom, 1993).

6.2.6 Manipulation Checks

I used the same items as in Chapter 5 to examine whether the manipulation of

leader emotional inconsistency (i.e., a three-item scale to measure leader

inconsistency; α = .91) was successful as well as to control for the leader's last

expression (i.e., one item each to measure happy and angry last expressions;

Sinaceur, Adam, Van Kleef, & Galinsky, 2013).

6.3 RESULTS

6.3.1 Manipulation Check Results

Emotional Inconsistency. In order to examine whether emotional

inconsistency was successfully manipulated, the inconsistency scale was

submitted to a 2 (Emotional inconsistency: constant emotions vs alternating

emotions) x 2 (Last expression: anger vs happiness) ANOVA. Participants

assigned to the emotional inconsistency condition thought that the leader came

across as more inconsistent (M= 5.83, SD= .80) than did the participants in the

emotional consistency condition (M= 2.39, SD= .86; $F(1,77)= 352.26$, p <.001; η^2 =

.82). Consequently, leader emotional inconsistency was successfully manipulated. There were no other effects.

Last Expression. Likewise, both the anger and happiness last expression check, respectively, was submitted to a 2 (Emotional inconsistency: constant emotions vs alternating emotions) x 2 (Last expression: anger vs happiness) ANCOVA. The ANCOVA controlled for anger (happiness) expressed throughout the scenario to ensure that results do not solely reflect participant perceptions of leader emotions prior to the last expression. Regarding the anger last expression check, participants in the angry last expression condition thought that the leader expressed more anger at the end (M= 5.79, SD= 1.15) than did participants in the happy last expression condition (M= 2.38, SD= 1.23; F(1,76)= 75.55, p <.001; η^2 = .45). Moreover, there was a main effect of anger perceived throughout the scenario on anger perceived at the end of the scenario (F(1,76)= 16.08, p <.001; η^2 = .09). There were no other effects. With regards to the happiness last expression check, participants allocated to the angry last expression condition thought that the leader expressed less happiness at the end (M= 2.72, SD= 1.76) than did participants in the happy last expression condition (M= 5.12, SD= 1.40; F(1,76)= 11.34, p <.01; η^2 = .09). Apart from this, there was a main effect of happiness perceived throughout the scenario on happiness perceived at the end of the scenario (F(1,76)= 51.75, p <.001; η^2 = .27). There were no other effects. Thus, the last expression manipulation was successful.

6.3.2 Analytical Strategy

The present study followed the same analytical strategy as the study reported in Chapter 5. Thus, Hypothesis 1 and 2 were tested using the path modelling capabilities of Mplus Version 7 (Muthén & Muthén, 1998-2012). Following the recommendations of Hayes and Preacher (2014) regarding statistical

analyses involving a multicategorical independent variable (IV) I created specific dummy variables to model the impact of mean differences of all three of my experimental categories (i.e., inconsistent emotions, happiness, and anger) whilst controlling for both the respective experimental category a specific analysis was not designed to examine (e.g., the relative effect of the mean difference between leader happiness and anger or vice versa on the outcome variable) as well as the last emotional expression (e.g., as a means to ensure that the order of inconsistency does not influence study results).

Identical to my analytical approach in Chapter 5, Hypothesis 1 was tested by conducting two separate analyses designed to test the effects of an interaction between leader emotional inconsistency, operationalised as mean differences between leader happiness and inconsistent emotional expressions, and follower epistemic motivation on creative process engagement as well as the same analysis investigating leader emotional inconsistency operationalised as mean differences between leader anger and inconsistent emotional expressions. Specifically, I used indicator coding to create two dummy variables (D1 and D2) each representing a mean difference test between two experimental categories with a predetermined control group. For the first set of analyses, leader happiness was assigned as the control group. D1 (contrast coded as 0 for leader happiness and 1 for inconsistent leader emotions) thus represented the impact of the mean difference between leader happiness and leader inconsistent emotional expressions on creative process engagement, whereas D2 (contrast coded as 0 for leader happiness and 1 for leader anger) reflected the impact of the mean difference between leader happiness and leader anger on creative process engagement. For the second set of analyses, leader anger was assigned as the control group. Here, D1 (contrast coded as 0 for leader anger and 1 for inconsistent leader emotions) represented the impact of the mean difference between leader anger and leader inconsistent emotional expressions on creative process engagement. D2 (contrast coded as 0

for leader anger and 1 for leader happiness) reflected the impact of the mean difference between leader anger and leader happiness on creative process engagement. In both sets of analyses, I added mean-centred follower epistemic motivation and the interaction terms between D1 and epistemic motivation as well as D2 and epistemic motivation to the model to control for the relative interaction effect of D2 with epistemic motivation (see Hayes & Preacher, 2014 for a detailed description of the role of relative effects in the context of statistical analyses involving multicategorical IVs). Similarly, in both sets of analyses I controlled for the respective last expression by including a dummy variable (contrast coded 0 for happiness and 1 for anger last expressions).

To test Hypothesis 2, which involved a moderated mediation model, I employed path modelling including bias-corrected bootstrapping procedures (Edwards & Lambert, 2007; Hayes, 2015; Preacher, Rucker, & Hayes, 2007). Moderated mediation is established in case the bias-corrected confidence interval does not contain zero (Hayes, 2015). Regarding the number of resamples required for bootstrapping, the present study follows the approach of Hayes (2015) using 10000 bootstrap resamples. As previously described in Chapter 5, I extended the methodological recommendations by Hayes and Preacher (2014), which solely described mediation analyses to be able to conduct moderated mediation analyses using a multicategorical IV (the appropriateness of my approach including the Mplus syntax used has been verified by Preacher, personal communication, July 23, 2016). Similar to the approach described to testing Hypothesis 1, I ran two sets of moderated mediation analyses (i.e., dependent on the respective control group being leader happiness or anger). D1 and D2 were computed as described above and included into the a-path of the model predicting creative process engagement along with mean-centred follower epistemic motivation as well as their two interaction terms and the last expression dummy (contrast coded 0 for happiness and 1 for anger last expressions). Regarding the b-path of the model, I entered

mean-centred creative process engagement as a predictor of the outcome variable creative performance (i.e., a summation score consisting of z-standardised scores of fluency, originality, and flexibility as previously described in section 5.3.6; Carson et al., 2003; Runco et al., 1987).

6.3.3 Results for Creative Process Engagement

Hypothesis 1 proposed that follower epistemic motivation moderates the relationship between leader emotional inconsistency and follower creative process engagement. Results of path analyses are presented in Table 6.1. Similar to my approach in Chapter 5, I first report results for analyses contrasting leader happiness vs. leader inconsistent emotions (i.e., leader happiness being the control group), followed by analyses contrasting leader anger vs. leader inconsistent emotions (i.e., leader anger being the control group).

I found a significant interaction between leader emotional inconsistency (contrast coded as 0 for leader happiness and 1 for inconsistent leader emotions) and follower epistemic motivation in the prediction of follower creative process engagement (β = .84, p <.001). Subsequently, simple slope analyses were conducted to explore the pattern of the interaction (Aiken & West, 1991). Results showed that the simple slope for participants with high epistemic motivation was significant and positive (+1SD, β = 1.06, t = 3.71, p <.001) indicating that participants with high epistemic motivation exhibited greater creative process engagement after the leader expressed emotional inconsistency rather than happiness. Furthermore, counter to my expectation the simple slope for participants with low epistemic motivation was significant and negative (-1SD, β = -.84, t = -2.92, p <.01), showing that for participants low in epistemic motivation the observation of leader emotional inconsistency decreases their creative process engagement. The interaction effect is illustrated in Figure 6.2.

However, in the second set of analyses I merely found a marginally significant interaction between leader emotional inconsistency (contrast coded as 0 for leader anger and 1 for inconsistent leader emotions) and follower epistemic motivation predicting follower creative process engagement (β = .36, p =.057). Despite the fact that no interaction effect was found in this case that conforms to conventional rules regarding significance testing, in the following I still carried out moderated mediation analyses for the contrast between leader anger vs. leader emotional inconsistency since moderated mediation can occur in the absence of a significant interaction effect (e.g., in case a mediator merely operates at certain levels of the moderator and direct effects occur at other levels; James & Brett, 1984; Preacher et al., 2007).

Taken together, these results provide partial support for Hypothesis 1.

FIGURE 6.2
Moderating Effect of Epistemic Motivation on the Relationship between Leader Emotional Inconsistency (0= Leader Happiness, 1= Leader Emotional Inconsistency) and Creative Process Engagement
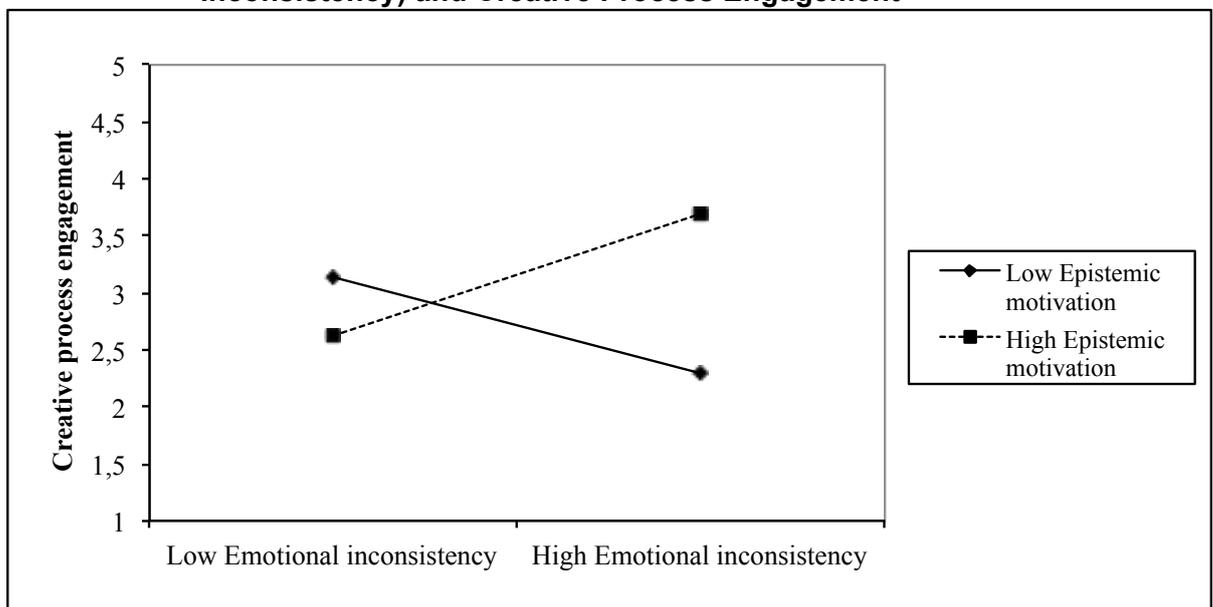
TABLE 6.1
Results of Path Analyses of Leader Emotional Inconsistency (vs. Leader Happiness and Leader Anger) and Creative Process Engagement

Predictor	Leader happiness as control group				Leader anger as control group			
	B	*SE*	*t*	*R²*	*B*	*SE*	*t*	*R²*
Leader emotional inconsistency (D1)	.23	.20	1.14		.26	.21	1.27	
Leader consistent emotions[1](D2)	-.04	.28	-.13		.04	.28	.13	
Leader emotional inconsistency x epistemic motivation	.84	.18	4.77***		.36	.19	1.91	
Leader consisent emotions x epistemic motivation	.48	.22	2.19*		-.48	.22	-2.19*	
Follower epistemic motivation	-.22	.15	-1.48		.26	.16	1.61	
Last expression	-.00	.18	-.00		-.00	.18	-.01	
				.41***				.41***
n				81				81

*p < .05
***p < .001
[1]= Leader consistent emotions refer to the respective other consisent emotional expression than the one in the control group e.g., D2 refers to leader anger (happiness) when the control group is leader happiness (anger).

6.3.4 Results for Creative Performance

Hypothesis 2 proposed a moderated mediation model in which epistemic motivation moderates the relationship between leader emotional inconsistency and follower creative performance (conceptualised as a z-standardised summation score of fluency, originality, and flexibility; Runco et al., 1987) via follower creative process engagement. Similar to my approach to reporting results in Chapter 5, I initially present results for analyses contrasting leader happiness vs. leader inconsistent emotions (i.e., leader happiness being the control group), followed by analyses contrasting leader anger vs. leader inconsistent emotions (i.e., leader anger being the control group).

Moderated mediation analysis results for the contrast between leader happiness and leader emotional inconsistency showed that there was a significant positive moderated mediation effect for followers with high epistemic motivation

(conditional indirect effect: .43; 95% CI Low = .108; CI High = .829), as well as a negative moderated mediation effect for followers with low epistemic motivation, which again was observed counter to my initial expectations (conditional indirect effect: -.25; 95% CI Low = -.531; CI High = -.052).

Moderated mediation analysis results for the contrast between leader anger and leader emotional inconsistency revealed a significant moderated mediation effect for followers with high (conditional indirect effect: .25; 95% CI Low = .067; CI High = .538), but not low (conditional indirect effect: -.04; 95% CI Low = -.254; CI High = .170) levels of epistemic motivation.

Overall, the results lend support to Hypothesis 2 predicting that leader emotional inconsistency increases follower creative performance for employees with high levels of epistemic motivation. For low epistemic motivation followers the picture is more complex and dependent on the emotional expression leader emotional inconsistency is compared to. When compared to leader displays of happiness, leader emotional inconsistency decreases creative performance of low epistemic motivation followers via decreases in their creative process engagement. However, when compared to leader displays of anger, this negative impact of leader emotional inconsistency does not replicate and instead is fully in line with study findings reported in Chapter 5.

6.4 DISCUSSION

The present study replicated the main findings reported in Chapter 5. Namely, I was able to demonstrate that for followers with high levels of epistemic motivation leader displays of emotional inconsistency increase creative process engagement despite a marginally significant result when examining the mean difference between leader anger and leader emotional inconsistency in this respect (i.e., Hypothesis 1). Furthermore, counter to my expectations, in the case of leader happiness as comparison group leader displays of emotional inconsistency had an

adverse effect on the creative process engagement low epistemic motivation followers exhibited.

Consistent with my predictions, I also found that epistemic motivation moderated the relationship between leader emotional inconsistency and follower creative performance via creative process engagement (i.e., Hypothesis 2). Specifically, I found that followers with high levels of epistemic motivation benefit from leader emotional inconsistency with regards to both their creative process engagement and subsequent creative performance. For low epistemic motivation followers, results were mixed. Whilst leader displays of emotional inconsistency had a negative effect on follower creative performance through decreased creative process engagement when comparing mean differences between leader happiness and emotional inconsistency, I did not find the same results when comparing mean differences between leader anger and emotional inconsistency.

Put differently, followers that are able to process the social information conveyed by leader emotional inconsistency show increased engagement in creative behaviors. Furthermore, I showed that these favorable effects on creative process engagement eventually lead to an upsurge in subsequent creative performance. Conversely, in case followers merely engage in surface-level information processing leader displays of emotional inconsistency may either have a negative effect on said outcomes or no effect at all. These findings are discussed together with their theoretical and practical implications over and above what has already been reported in Chapter 5.

6.4.1 Theoretical Implications

In addition to the theoretical contributions discussed in Chapter 5, the main contribution of the present study is that the results allow for claims regarding constructive replication (Lykken, 1968) of study findings as well as for greater confidence regarding the internal validity of my research model. Scholars have

emphasised such replication efforts as a "scientific gold standard"(Jasny, Chin, Chong, & Vignieri, 2011, p.1225) because they strengthen "confidence in the validity of the hypothesised relationships" (Eden, 2002, p.842).

6.4.2 Practical Implications

Over and above practical implications presented in the previous chapter, my study may have implications for how emotional inconsistency is perceived in virtual teams where few nonverbal cues are available (see Cheshin, Rafaeli, & Bos, 2011 for a study on the effects of consistently displayed leader happiness and anger in virtual teams). Compared to the study described in Chapter 5 using a video manipulation of leader emotional inconsistency, the present study employed a scenario-type manipulation with fewer nonverbal cues, which may have implications for both the perception of leader emotional displays as well as their consequences (Barrett, Mesquita, & Gendron, 2011). As I have obtained slightly differing results in my scenario-type replication in comparison with the results reported in Chapter 5, managers and HR representatives in organisations would be well advised to be aware of potential differences regarding the impact of leader emotional influence considering different channels of communication (e.g., face-to-face and virtual).

6.4.3 Limitations and Future Directions

The findings of my replication study also raise a number of questions for future research. For example, results reported in Chapter 5 provided unequivocal support for my research model whereas in the present study I found partial support for some of my hypotheses. More specifically, whereas leader displays of emotional inconsistency was not related to both creative process engagement and creative performance for low epistemic motivation followers independently on what the comparison group was (i.e., leader happiness or leader anger) in Chapter 5,

the results of the present study show that this result could only be replicated for a comparison between leader anger and leader emotional inconsistency. When comparing leader happiness to leader emotional inconsistency, results of the present study revealed a negative effect of leader emotional inconsistency on follower creative performance via decreases in creative process engagement, which only partially confirmed my initial hypothesis. I believe that the slight difference in results between both studies is due to the scenario-type manipulation of leader emotional inconsistency employed in the present study. More specifically, compared to the video manipulation employed in Chapter 5, the scenario manipulation featured less nonverbal cues (e.g., constant changes regarding both the leader's tone of voice and his body postures were missing), which could have slightly changed the emotion perception of study participants (Barrett et al., 2011). Recent research shows that the potential impact of emotion words (e.g., as employed in scenario manipulations of emotional expressions; Aguinis & Bradley, 2014) is dependent on the context in which they are communicated (Stam, van Knippenberg, Wisse, & Nerdveen Pieterse, 2016). It may be the case, that the relative lack of nonverbal cues featured in the scenario manipulation (i.e., as compared to the video manipulation) increases observer feelings of unpredictability and uncertainty, which have previously been discussed as possible consequences of emotionally inconsistent displays in negotiation settings (Sinaceur et al., 2013). Therefore, future research efforts could concentrate on the possibility that leader emotional inconsistency is perceived differently depending on the type of experimental manipulation (video vs. scenario).

Apart from differences pertaining to the experimental manipulation employed, a further avenue for future research in this respect may concerns whether follower individual differences account for the aforementioned differences in leader emotion perception. Past research has shown that followers perceive leader emotional expressions differently depending on their personal predisposition

to be agreeable (Van Kleef et al., 2010). Extending this line of research, it may be worth investigating whether individual difference factors related to emotional reactivity such as neuroticism (Gross, Sutton, & Ketelaar, 1998) or insecure attachment styles (Harms, 2011) exacerbate the negative effect of angry expressions as part of leader emotional inconsistency. It is likely that such a predisposition to negative emotional reactivity could negatively impact creative performance after having been exposed to leader emotional inconsistency via the affective reactions pathway since creative behaviors tend to be affect-driven (Baas et al., 2008; van Kleef et al., 2012).

Lastly, a limitation of the studies reported in Chapter 5 as well as the present chapter concerns the fact that both studies merely serve to establish internal validity for study findings, which leaves limited confidence on whether the results obtained generalize to a real-world environment (e.g., in terms of external validity; Grant & Wall, 2009). I address this limitation in Chapter 8 by conducting a weekly diary study in an organizational setting.

6.4.4 Conclusion

This study aimed at replicating the results reported in Chapter 5 on the benefits of leader displays of emotional inconsistency between happiness and anger with regards to follower creative performance. I successfully replicated my key proposition that, for high epistemic motivation followers, leader displays of emotional inconsistency boost follower creative performance by increasing their engagement in the creative process. In contrast to results obtained in Chapter 5, I found that for low epistemic motivation followers this effect depends on which emotional expression leader emotional inconsistency is compared to (i.e., leader happiness or leader anger). Apart from providing further evidence for the internal validity of my general research model, the present study showed that it is important to consider the channels through which leaders communicate when displaying

emotional inconsistency and its impact on follower work-related outcomes such as creative performance.

CHAPTER 7

DEVELOPMENT AND INITIAL VALIDATION OF THE LEADER EMOTIONAL INCONSISTENCY SCALE (LEIS)

7.1 CHAPTER SUMMARY

This chapter describes the theoretical justification as well as the methodological rationale used to develop and validate a scale to measure leader emotional inconsistency between happiness and anger, namely the *leader emotional inconsistency scale* (LEIS). The theoretical basis of the LEIS is informed by prior research on leader emotion in general as well as leader emotional inconsistency in particular (Filipowicz et al., 2011; Sinaceur et al., 2013; van Kleef, Homan, et al., 2009). After outlining the theoretical foundations of the LEIS, the scale development and refinement process will be described. Finally, a study will be reported that was conducted to demonstrate both the reliability and validity of the proposed scale.

7.2 THEORETICAL JUSTIFICATION FOR THE DEVELOPMENT OF THE LEIS

Emotional expressions play an crucial role in organizational leadership because they affect thoughts, experiences, and ultimately behaviours of individuals as well as teams at work (Lindebaum & Jordan, 2012; van Kleef et al., 2012). To date, research on the interpersonal effects of leader emotional expressions predominantly investigated leader emotional displays that are consistent over time, which is unrealistic since leader emotional displays change frequently, even fluctuations between different emotional states are possible (Frijda, 1986; van Kleef et al., 2012). Furthermore, said research efforts mainly employed experimental research designs that are useful to establish internal validity for a given set of hypotheses but are less effective at providing evidence of external validity in the field (Saunders et al., 2009; van Kleef, 2014). This is because field research compared to experiments are characterised by relatively higher levels of participant

diversity, a lack of control over external variables, an increased focus on behavioural indicators, and a lower likelihood of publication bias, all of which contribute to both an increase in external validity as well as the robustness of research findings (Maner, 2016). Generally, measurement scales used to assess consistent emotional expressions in past experimental studies could also be utilised in field research (e.g., Van Kleef, De Dreu, Pietroni, & Manstead, 2006). However, so far no such scale exists for the measurement of inconsistent emotions. This warrants the development of a leader emotional inconsistency scale (LEIS).

In order to develop a scale to measure inconsistent leader emotional expressions, it is important to carefully select the two discrete emotions that are used to induce emotional inconsistency. This is because different discrete emotional expressions can differentially affect observer behaviour (van Kleef, 2009). For example, leader displays of anger may provide feedback to followers concerning substandard performance, whereas displays of sadness can be perceived as a solicitation for help (van Kleef et al., 2012). In a similar vein, the effect of displayed emotional inconsistency might change depending on which discrete emotions are chosen to create fluctuation and inconsistency (Sinaceur et al., 2013). This chapter describes the development of a scale to measure leader emotional inconsistency between happiness and anger. This is because alternating emotional displays between happiness and anger represents a typical case of emotional inconsistency (Frijda, 1986; Sinaceur et al., 2013). Moreover, happiness and anger are easily recognisable emotions, reflect high levels of arousal, and can be seen as their opposites in terms of valence (Russell & Barrett, 1999; Russell, 1980). What is more, past research shows that leader expressions of happiness and anger individually influence work related outcomes such as follower performance, creativity, as well as organisational citizenship behaviour (Koning & Van Kleef, 2015; van Kleef et al., 2010; van Kleef, Homan, et al., 2009; Visser et

al., 2013). Thus, it is plausible to assume that a leader expression that combines displays of happiness and anger could equally enact a certain social influence on followers.

Finally, previous research shows that the order of emotional inconsistency between happy and angry displays (e.g. happy-angry versus angry-happy) is an important aspect to consider when constructing a scale to measure said construct (Filipowicz et al., 2011; Sinaceur et al., 2013). Despite the fact that the order does not impact how emotional inconsistency between happiness and anger influences work-related outcomes (Sinaceur et al., 2013), in practice it nevertheless matters because some leaders may only express inconsistency in a certain manner e.g., alternating between happiness and anger or between anger and happiness, respectively. Therefore, the proposed leader emotional inconsistency scale will consist of two subscales to measure emotional inconsistency between happiness and anger depending on the order in which the two discrete emotions are expressed (i.e., between happy and angry displays, as well as between angry and happy displays).

7.3 METHODOLOGICAL RATIONALE

The proposed leader emotional inconsistency scale (LEIS) was constructed following methodological recommendations for scale development and validation outlined by DeVellis (2012) and Hinkin (1995, 1998). More specifically, based on a theoretical definition of leader emotional inconsistency and available leader emotion scales (e.g., Van Kleef et al., 2006), an initial item pool was deductively formulated. To determine content adequacy of the proposed items, a content validity assessment was undertaken and expert reviews were requested (Schriesheim, Powers, Scandura, Gardiner, & Lankau, 1993). Based on the results of both the content validity assessment and expert reviews, a preliminary version of

the LEIS was developed. Subsequently, a study was conducted to test the structure as well as psychometric properties of the new scale (Hinkin, 1995).

7.3.1 Deductive Formulation of the Initial Item Pool

Before items for a newly proposed scale can be generated researchers need to review the conceptual basis for such items (Hinkin, 1998). In case a strong theoretical foundation including a definition of the construct exists, a measurement scale can be developed deductively, that is, building on existing theory and research (Schwab, 1980). If, on the other hand, the conceptual basis for a scale does not result in easily identifiable construct dimensions, an inductive approach is more appropriate (e.g., involving the conduct of an exploratory study to arrive at meaningful scale dimensions; Hinkin, 1998).

For the present scale development process a deductive approach was chosen in order to develop items for the proposed scale. This is because a considerable theoretical and empirical research basis exists for leader emotional inconsistency between happiness and anger (cf. Filipowicz et al., 2011; Frijda, 1986; Sinaceur et al., 2013; van Kleef et al., 2012). Furthermore, the present study adopts the definition of leader emotional inconsistency put forward by Sinaceur and colleagues (2013). Accordingly, leader emotional inconsistency refers to *leader expressions that fluctuate between happy and angry emotions over the course of a single encounter* (Sinaceur et al., 2013). In addition to this, items to measure consistently displayed leader happiness and leader anger, respectively, are available from previous research (e.g., van Kleef et al., 2006).

In order to formulate an opening sentence and an initial item pool, recommendations by DeVellis (2012) were adopted. Specifically, apart from being informed by the construct definition items need to reflect a scale's purpose. The purpose of the LEIS is to allow employees to rate the frequency of their supervisor's emotional inconsistency between happy and angry as well as between

angry and happy displays. Additionally, recommendations by DeVellis (2012) also suggest that scale developers need to decide on the time frame an item refers to as well as on the general response format of the scale. For the LEIS, the time frame in which employees are supposed to report on their supervisor's emotional inconsistency is *in general*, that is the extent to which their supervisors display emotional inconsistency on average. Regarding the response format, a seven-point Likert scale was chosen with a neutral midpoint, which can be regarded as common practice (DeVellis, 2012).

On the basis of the aforementioned recommendations an opening sentence as well as an initial set of scale items was developed. The opening sentence "*When interacting with your leader in general, how often does his/her emotional expression…*" is supposed to indicate that the items refer to a single encounter (e.g., such as an interaction) with a leader. It also defines the time scale for the items, which is *interactions in general*. The item development for the LEIS was based on available items that were used to measure consistently displayed leader happiness (i.e., "happy", "satisfied", "joyful") as well as leader anger (i.e., "angry", "irritated", "aggravated") in previous research (van Kleef et al., 2006; Visser et al., 2013). The preliminary LEIS items have then been generated by pairing the adjectives happy, satisfied, and joyful (for happiness) with angry, irritated, and aggravated (for anger) together with a word that symbolizes the shift between the two discrete emotions to capture emotional inconsistency (e.g., changes from…to, switches from...to). Accordingly, two subscales were developed measuring happy-angry and angry-happy displays, respectively. Each subscale consists of nine items each, amounting to an overall 18-item scale to measure leader emotional inconsistency. The scale items are displayed in Table 7.1.

TABLE 7.1
The Initial Set of Items and Proposed Dimensions of the LEIS

When interacting with your leader in general, how often is his/her emotional expression...

Happy-Angry displays

HA1 changing from happy to angry

HA2 switching from joyful to irritated

HA3 changing from satisfied to aggravated

HA4 switching from happy to irritated

HA5 changing from happy to aggravated

HA6 switching from joyful to angry

HA7 changing from joyful to aggravated

HA8 switching from satisfied to angry

HA9 changing from satisfied to irritated

Angry-Happy displays

AH1 changing from angry to happy

AH2 switching from irritated to joyful

AH3 changing from aggravated to satisfied

AH4 switching from irritated to happy

AH5 changing from aggravated to happy

AH6 switching from angry to joyful

AH7 changing from aggravated to joyful

AH8 switching from angry to satisfied

AH9 changing from irritated to satisfied

7.3.2 Content Validity Assessment and Expert Reviews

Content validity concerns the extent to which scale items reflect a specific domain of interest (e.g., such as leader emotional inconsistency; Hinkin, 1995). Following recommendations for assessing content validity (Hinkin, 1998; Nunnally, 1978), a sample of respondents was asked to match each scale item with one of the proposed sub-scales of the LEIS. In accordance with Hinkin's (1995) suggestion, items were only retained if 75% of the sample correctly classified them under the appropriate sub-scale. A total of six doctoral researchers from the Work & Organisational Psychology Group at Aston Business School were asked to judge the content validity of each item and classify it under one of two LEIS sub-scales. The sample received the definition of leader emotional inconsistency as well as a description of the two sub-scales (e.g. happy-angry and angry-happy). In the space

beside each item, participants were instructed to indicate the sub-scale that they believed the item matched or mark the item as "NA" (i.e., not applicable) if they believed that the item does not reflect the content of any of the two sub-scales. Four of the six experts correctly classified all items underneath their proposed sub-scale. Overall, individual items had adequate inter-rater agreement ranging between κ = 0.83 – 1 (equating to 83% - 100% agreement), which meets the aforementioned recommendation of 75% agreement for ensuring content validity.

Due to the fact that the content validity assessment revealed that there was still room for improvement regarding scale development, the proposed item list was sent to two senior academics for an additional expert review. This procedure is in line with recommendations by DeVellis (2012), who advocates seeking feedback from subject matter experts regarding the clarity and conciseness of a proposed set of items. Based on the feedback received through expert reviews the wording of both the opening sentence as well as the item list was adapted. The adapted item list is displayed in Table 7.2.

TABLE 7.2
The Adapted Set of Items and Proposed Dimensions of the LEIS

When interacting with your manager, how often does his/her emotional expression change from...

Happy-Angry displays

HA1 happy to angry

HA2 joyful to irritated

HA3 satisfied to aggravated

HA4 happy to irritated

HA5 happy to aggravated

HA6 joyful to angry

HA7 joyful to aggravated

HA8 satisfied to angry

HA9 satisfied to irritated

Angry-Happy displays

AH1 angry to happy

AH2 irritated to joyful

AH3 aggravated to satisfied

AH4 irritated to happy

AH5 aggravated to happy

AH6 angry to joyful

AH7 aggravated to joyful

AH8 angry to satisfied

AH9 irritated to satisfied

7.4 LEIS ITEM REFINEMENT AND EVALUATION STUDY

The goal of item refinement and evaluation is to arrive at a final set of items that satisfies the standards for the scale psychometric properties of reliability and validity (Hinkin, 1998). In line with this, reliability indicates whether a set of items measures the true score of a underlying latent variable (e.g., leader emotional inconsistency) in a consistent and predictable way (DeVellis, 2012). Validity on the other hand concerns whether the underlying latent variable measured by a set of items is actually the intended variable a researcher wanted to capture (DeVellis, 2012). Different types of reliability and validity exist and there is no unanimous agreement in the literature as to which are most important for scale evaluation (Hinkin, 1995). Generally, the American Psychological Association (1985) outlined the following criteria for psychometrically sound measures: internal consistency,

content validity, criterion-related validity, convergent and discriminant validity. To assess whether the LEIS meets these criteria I followed recommendations by DeVellis (2012), Hinkin (1995, 1998), Byrne (2010), Hu and Bentler (1999), Bentler and Chou (1987), and Field (2009).

Taken together, the following study was conducted to examine the dimensionality of the proposed scale and refine items if needed. In addition to this, the objective was to evaluate the scale psychometric properties of the LEIS and provide evidence for internal consistency, convergent and discriminant validity.

7.4.1 Data Collection and Sample

In order to examine the reliability and validity of the LEIS the preliminary item set that was retained after content validity assessment and expert reviews was piloted in a study with full-time employees recruited via Prolific Academic (2015), an online crowdsourcing platform. Participants were pre-screened to solely include full-time employees that had a direct supervisor to ensure that leader-follower interactions involving the expressions of emotional inconsistency are likely to occur. Furthermore, participants had to be English natives, thus only nationals from the UK and the United States were included in the study. This resulted in a potential participant pool of 805 respondents registered with Prolific Academic. An online link to the study was posted on the Prolific Academic website that this participant pool was able to access. All participants recruited were paid £2.50 for the 25min study and provided their informed consent before completing the online survey. After 266 participant submissions data collection was halted because this sample already met sample size recommendations to successfully perform the statistical procedures necessary to establish scale reliability and validity (Bentler & Chou, 1987; Hinkin, 1998; Schwab, 1980). Out of the 266 participants submissions, 16 were dropped because they were incomplete. This resulted in a final sample size of 250 participants for subsequent analyses (response rate: 94%). Regarding

the sample's demographic composition, 48% of participants were male, 52% female. The age of participants ranged from 20 to 73 (*M* = 33.3; *SD* = 8.9). Participant's job tenure ranged from 0 to 47 years (*M* = 7.1; *SD* = 6.7). Finally, on average participants went through 3.9 years of higher education (*SD* = 2.6). Following recommendations by DeVellis (2012) and Hinkin (1998), the overall sample was randomly split in two subsamples where each subsample consists of approximately 50% of the original sample. Using SPSS 19 (IBM Corp., 2010) two subsamples were randomly created consisting of 128 and 122 respondents, respectively. In accordance with recommendations for scale development, the larger subsample (i.e., 128 respondents) was used for the process of item refinement and establishing scale reliability (e.g., exploratory factor analysis), whereas the smaller subsample (i.e., 122 respondents) was used for the establishment of scale validity and to assess whether the proposed structure of the measurement scale yields a good fit with the data (e.g., confirmatory factor analysis; DeVellis, 2012). In terms of sample size recommendations for performing exploratory factor analyses, a sample of 128 respondents for the examination of 18 items of the LEIS equates to a participant-to-item ratio of 7:1, which is considered adequate (Tinsley & Tinsley, 1987). The rule of thumb regarding research involving structural equation modelling (e.g., confirmatory factor analyses) is a ratio of 5:1 regarding sample size to the number of free parameters (Bentler & Chou, 1987). With regards to the confirmatory factor analysis reported under section 7.3.3.8 this ratio is 4.88:1. Given the fact that many published studies do not meet the above 5:1 ratio, 4.88 respondents per free parameter was considered as adequate (Kenny, 2014).

7.4.2 Item Refinement: Exploratory Factor Analysis

The first step in the item refinement process usually involves performing an exploratory factor analysis to investigate whether the structure of a proposed set of

items in practice conforms to the theoretical predictions made earlier in the chapter (i.e., whether the 18 items cleanly map onto the two proposed subscales of the LEIS; Hinkin, 1995).

Two broad classes of data analytic techniques exist to extract factors within exploratory factor analysis: principal components analysis (PCA) and principal factors analysis (PFA; Field, 2009). The difference between these techniques is that PCA reduces the data to a set of composite variables that reflect how individual items have been responded to in a given sample (DeVellis, 2012). Thus, components in PCA represent a reorganisation of the information with regards to the actual items. PFA on the other hand creates factors that represent idealised, hypothetical variables excluding potential error variance not shared amongst items (DeVellis, 2012). Furthermore, factors in PFA are not solely a reflection of how respondents answered a set of items. Instead, the aim is to create hypothetical, idealised variables that determine how a set of items is responded to (DeVellis, 2012). There is no unanimous agreement over which factor-analytical technique to choose (Hinkin, 1995). In spite of this, PCA generally is the more frequently chosen factoring method because both methods yield comparable results (Field, 2009). Furthermore, the emergence of factors in PFA is sometimes unclear and more difficult to interpret than in PCA (DeVellis, 2012; Rencher, 2002). Thus, I decided to use PCA as the exploratory factor analytical method for the present scale development process. The number of retained components within PCA was informed by the Kaiser's criterion, which outlines that a component is required to have an eigenvalue greater than 1 to be retained (Field, 2009). Items loading on a component were retained based on a recommended cut-off point for item loadings of .40 or higher (Hinkin, 1998). From now on the term *factor* will be used when describing a *component* within PCA.

In addition to choosing a method of extraction in PCA, one also needs to consider how to rotate factors after they have been retained. This is because the

extraction method solely determines the appropriate number of factors to examine

but does not provide factor-related information in the most understandable way

(e.g., without rotation most items would highly load on one main factor; DeVellis,

2012). Therefore, rotation facilitates the interpretability of factors within PCA

(DeVellis, 2012). There are two available types of rotation for PCA: orthogonal and

oblique rotation (Field, 2009). The main difference between these rotational

methods is that orthogonal rotation assumes that all resulting factors are

independent (i.e., they do not correlate with each other), whereas oblique rotation

does not share this assumption and allows factors to be correlated (Field, 2009).

Which rotation method to choose should depend on substantial theoretical

assumptions towards the independence or correlation of potentially extracted

factors (DeVellis, 2012). Due to the fact that the two proposed subscales for the

LEIS represent the same variable (i.e., leader emotional inconsistency) with the

sole difference being the order of emotional display (happy-angry vs. angry-happy)

it is plausible to assume that the two proposed sub-scales are highly correlated

(Sinaceur et al., 2013). Therefore, for the purpose of this study oblique rotation was

used on all 18 items that comprise the preliminary version of the LEIS.

Apart from the methods pertaining to the extraction and rotation of items,

two further statistics were requested that provide relevant information for

exploratory factor analytical purposes, the Kaiser-Meyer-Olkin (KMO) value and

Bartlett's test of sphericity. The KMO is a statistic that tests sampling adequacy

(Field, 2009). The KMO statistic for the present study was .91, which is considered

adequate and asserts that factor analysis should yield distinct and reliable factors

(Field, 2009). Bartlett's test of sphericity examines the null hypothesis that the

factors under investigation are uncorrelated in the population (Field, 2009). If said

factors were uncorrelated, it would be difficult to establish composite factors on the

basis of commonalities, which is why one generally looks for a significant Bartlett's

test statistic. For the present study Bartlett's test of sphericity was significant (χ_2 =

2445.483, *df* = 153, *p* < .001) and therefore exploratory factor analysis is likely to yield composite factors.

Despite the fact that the factor structure of the LEIS was pre-determined by means of theory and expert reviews, to minimise bias, the exploratory factor analysis was run without forcing the number of factors. Exploratory factor analytic results are reported in the following sections. First, a preliminary exploratory factor analysis was conducted. Subsequently, several items were dropped based on guidelines regarding factor loadings, improvement of internal item consistency, and item communalities (DeVellis, 2012). After this, a second exploratory factor analysis will be reported with the final set of items that comprise the LEIS.

7.4.3 Preliminary EFA Results

Initial EFA results indicated that the 18 items of the LEIS load on three factors that each have an eigenvalue > 1 with each item loading exceeding the cut-off value .40. The extracted factors explained 79.96% of the total item variance, which can be considered adequate (e.g., 60% explained variance and more is considered acceptable; Hinkin, 1998). The first factor accounted for 50.29% of the total item variance, with the two other factors explaining 23.14% and 6.53%, respectively. Factor loadings are displayed in Table 7.3 and item communalities are reported in Table 7.4.

TABLE 7.3
Factor Loadings for the LEIS Items before Item Refinement

Items	OBLIMIN rotated loadings		
	Happy-Angry	Angry-Happy	Third dimension
Happy-Angry displays			
HA1 happy to angry	.69		-.44
HA2 joyful to irritated	.80		
HA3 satisfied to aggravated	.89		
HA4 happy to irritated	.93		
HA5 happy to aggravated	.91		
HA6 joyful to angry	.80		-.43
HA7 joyful to aggravated	.86		
HA8 satisfied to angry	.80		
HA9 satisfied to irritated	.86		
Angry-Happy displays			
AH1 angry to happy		.57	-.50
AH2 irritated to joyful		.86	
AH3 aggravated to satisfied		.85	
AH4 irritated to happy		.96	
AH5 aggravated to happy		.93	
AH6 angry to joyful		.78	
AH7 aggravated to joyful		.88	
AH8 angry to satisfied		.79	
AH9 irritated to satisfied		.84	
Cronbach's Alpha	.95	.95	.82
Eigenvalue	9.05	4.17	1.18
Variance explained (%)	50.29	23.14	6.53
Cumulative (%)	50.29	73.43	79.96

Note. These are PCA results, N = 128.

TABLE 7.4
Item Communalities of the LEIS before Item Refinement

	Extraction
HA1 happy to angry	.786
HA2 joyful to irritated	.682
HA3 satisfied to aggravated	.808
HA4 happy to irritated	.852
HA5 happy to aggravated	.825
HA6 joyful to angry	.888
HA7 joyful to aggravated	.842
HA8 satisfied to angry	.789
HA9 satisfied to irritated	.785
AH1 angry to happy	.765
AH2 irritated to joyful	.748
AH3 aggravated to satisfied	.792
AH4 irritated to happy	.868
AH5 aggravated to happy	.849
AH6 angry to joyful	.850
AH7 aggravated to joyful	.813
AH8 angry to satisfied	.693
AH9 irritated to satisfied	.758

7.4.4 Scale Reliability

A common method to establishing scale reliability is to compute the Cronbach's aplha statistic as a measure of internal item consistency (Hinkin, 1995). Since the subscales of the LEIS measure the same underlying construct (i.e., leader emotional inconsistency) high correlations were expected within and between the extracted factors. A commonly accepted cut-off value for Cronbach's Alpha is .70 (Hinkin, 1998). All three extracted factors as well as the overall scale reliability met this criterion. Both the happy-angry and angry-happy subscales yielded an Alpha of .95. The third factor consisted of cross-loadings of two items of the proposed happy-angry subscale (HA-1 and HA-6) as well as one item of the proposed angry-happy subscale (AH-1) and yielded an Alpha of .82. The overall

scale reliability of all 18 LEIS items was .94. Scale reliabilities are displayed in Table 7.3.

7.4.5 Item Refinement Process

DeVellis (2012) suggests that if the scale reliabilities of some scales are considerably above .90 one should consider dropping items to shorten the scale and consequently place less of a burden on respondents. Due to the fact that both theoretically proposed subscales yielded an Alpha of .95, this serves as an indicator to shorten the scale length. In order to decide upon which items to drop from the preliminary version of the LEIS factor loadings, communalities, and Alpha improvement of items were examined (DeVellis, 2012).

First, if factor loadings are over .65 this ensures that items clearly and substantially tap into one overarching construct (DeVellis, 2012). With regards to the 18 LEIS items, item AH-1 of the angry-happy subscale did not meet this criterion and was therefore excluded. Second, the communality of an item is an indicator of how much variance it shares with other items (Hinkin, 1998). Items with the highest communalities should be retained (Hinkin, 1998). The items of the LEIS with the highest communalities (i.e., substantially above .80) are items HA4-HA7 of the happy-angry subscale as well as items AH4-AH7 of the angry-happy subscale. Finally, items that contribute least to the overall internal consistency should be excluded from the scale (DeVellis, 2012). For this purpose, statistics were examined that indicate the improvement of Cronbach's Aplha after item deletion. Items that do not result in a substantial increase in Cronbach's Alpha after deletion are those that contribute most to internal consistency and should thus be retained. Largely verifying the results of the communality statistics, deleting items HA4-7 from the happy-angry scale as well as items AH4-7 from the angry-happy scale would result in the lowest Alpha improvement.

Consequently, after examining factor loadings, item communalities, and Alpha improvement statistics, items HA4-HA7 of the happy-angry subscale and items AH4-AH7 from the angry-happy subscale were retained to shorten the original scale and thus lower the burden for respondents that would complete the LEIS in the future. Having dropped ten items, the shortened version of the LEIS consists of eight items and was subsequently subjected to another exploratory factor analysis procedure.

7.4.6 EFA Results for the Final Version of the LEIS

EFA results showed that the eight items of the shortened LEIS load on two factors that each have an eigenvalue > 1 with each item loading exceeding .85. Thus, the shortened version of the LEIS cleanly mapped onto the theoretically derived two sub-dimensions happy-angry as well as angry-happy emotional displays (DeVellis, 2012). The extracted factors explained 84% of the total item variance, which was 4.04% more than the three extracted factors of the previous EFA. The first factor accounted for 54.97% of the total item variance, whilst the other explained a further 29.07% of variance. With regards to the present EFA, the KMO value (.81) as well as Bartlett's statistic for sphericity (χ_2 = 980.725, df = 28, p < .001) did not substantially change, thus the conclusions regarding sampling adequacy and correlation between factors remain the same. Factor loadings are displayed in Table 7.5 and item communalities are reported in Table 7.6.

TABLE 7.5
Factor Loadings for the LEIS items after Item Refinement

Items	OBLIMIN rotated loadings	
	Happy-Angry	Angry-Happy
Happy-Angry displays		
HA4 happy to irritated	.90	
HA5 happy to aggravated	.94	
HA6 joyful to angry	.85	
HA7 joyful to aggravated	.91	
Angry-Happy displays		
AH4 irritated to happy		.92
AH5 aggravated to happy		.94
AH6 angry to joyful		.89
AH7 aggravated to joyful		.93
Cronbach's Alpha	.93	.94
Eigenvalue	4.40	2.32
Variance explained (%)	54.97	29.03
Cumulative (%)	54.97	84.00

Note. These are PCA results, N = 128.

TABLE 7.6
Item Communalities of the LEIS after Item Refinement

	Extraction
HA4 happy to irritated	.771
HA5 happy to aggravated	.872
HA6 joyful to angry	.769
HA7 joyful to aggravated	.894
AH4 irritated to happy	.833
AH5 aggravated to happy	.883
AH6 angry to joyful	.814
AH7 aggravated to joyful	.884

7.4.7 Scale reliability

Both extracted factors as well as the overall scale reliability yielded a

Cronbach's Alpha of .88 or above, which is considered adequate (DeVellis, 2012).

More specifically, the internal consistency for the happy-angry subscale was .93,

for the angry-happy subscale .94, and for the overall LEIS .88. Scale reliabilities are displayed in Table 7.5.

7.4.8 Confirmatory Factor Analysis

After initial evidence regarding the structure of the LEIS as well as its reliability, a confirmatory factors analysis (CFA) should be the next step towards providing evidence of construct validity (DeVellis, 2012). CFA allows researchers to draw conclusions regarding the quality of a proposed factor structure by assessing the degree of model fit with a sample (Hinkin, 1998). The EFA results reported in the previous section suggested that the eight items of the LEIS load on the two theoretically derived factors happy-angry and angry-happy, respectively. The purpose of the CFA was to test, whether this structure can be confirmed (Hinkin, 1998). As already mentioned under section 7.3.3.1, to test the construct validity of the LEIS a subsample of 122 respondents was used. In order to run a CFA the structural equation modelling facilities of Mplus Version 7 (Muthén & Muthén, 1998-2012) were used. Following recommendations by Byrne (2010), maximum likelihood (ML) was used as estimator for the analysis and list-wise deletion as a means for handling missing data (Byrne, 2010). To examine the construct validity of the LEIS, factor loadings of individual items were examined and the model fit of two competing models was tested (DeVellis, 2012).

Theoretically, leader emotional inconsistency measured by the LEIS can be considered a second-order construct with two underlying factors: happy-angry emotional displays, and angry-happy emotional displays. This would necessitate the examination of item loadings on each of the proposed factors and ideally how the two proposed first-order factors load onto the second-order construct leader emotional inconsistency. However, due to the fact that in Mplus a second-order factor needs at least three first-order factors to be identified (Muthén, personal communication, September 14, 2015), a second-order CFA with two first-order

factors was not possible. Instead, the correlation between the two proposed first-order factors was examined as an indication of a potential second-order factor (e.g., a high correlation would be indicative of considerable amounts of shared variance; Kline, 2011). Due to the fact that several alternative models may fit the same dataset, common practice in CFA involves testing plausible competing models (Byrne, 2010). Therefore, in comparison with the proposed two-factor first-order model a competing one-factor model was tested.

In order to examine the fit of the two competing models, the following indices were used. First, the chi-square (χ^2) statistic was examined, which indicates the fit between model-implied variance and covariance and the observed variance and covariance in the sample (Hinkin, 1998). Despite the fact that a non-significant chi-square statistic is considered optimal, this ideal benchmark is very dependent on large sample sizes (Hinkin, 1998). Instead, a more reasonable benchmark is a significant chi-square statistic where the chi-square to degrees of freedom (χ^2/df) ratio is 3:1 in combination with otherwise high fit indices. There is no general agreement over which fit indices to examine apart from the aforementioned chi-square statistic, however, the most popular ones appear to be the comparative fit index (CFI), the root mean square error of approximation (RMSEA), the standardised root mean square residual (SRMR), and the Tucker-Lewis Index (TLI; Hu & Bentler, 1999; Kenny, 2014). However, recent research shows that the RMSEA can have artificially large values for models with small degrees of freedom (df) and a low sample size (Kenny, Kaniskan, & McCoach, 2014). As a result, Kenny (2014) argues not recommend to compute RMSEA for such models. In line with this, Hu and Bentler (1999) argue that for sample sizes lower than 250 a combination of fit statistics between CFI and SRMR should be preferred to RMSEA and SRMR because the latter tended to inappropriately reject such models. Following from this, for the present CFA with a sample size of 122 and 19 *df* the following fit statistics will be reported: CFI, TLI, and the SRMR. With regards to cut-

off criteria, a CFI and TLI between .90 and .95 can be considered a good fit, whilst values over .95 reflect an excellent fit to the data (Byrne, 2010; Hu & Bentler, 1999). Regarding the SRMR, a value of up to .10 is acceptable, less than .08 is generally considered a good fit whilst 0 represents perfect fit (Hu & Bentler, 1999; Schweizer, 2010).

CFA results for the proposed two-factor first-order model showed that all item loadings were significant and loaded higher than .81 on their intended factors, which is considered adequate (DeVellis, 2012). There was a substantial correlation between both first-order factors of r = .87, which points towards the existence of a second-order factor in line with the theoretical argumentation of the LEIS (Kline, 2011). The factor loadings are reported in Table 7.7. The model yielded a significant χ^2 statistic (52.69, df = 19, p < .0001), suggesting a sub-optimal model fit. However, the χ^2/df ratio of 2.77:1 indicated an acceptable fit (Hinkin, 1998). With regards to the other fit indices, the CFI was .97, the TLI .95, and the SRMR .044 suggesting an excellent fit. In comparison, the competing one-factor exhibited a considerably worse fit to the data. Results showed a significant χ^2 statistic (489.90, df = 20, p < .000), however, in comparison with the two-factor first-order model it did not arrive at a satisfactory χ^2/df ratio (24.19:1). In addition to this, all previously reported fit statistics failed to meet acceptable cut-off levels (CFI = .54; TLI = .36 ; SRMR = .23).

Taken together, the CFA results reported above provide evidence of the construct validity of the LEIS. Not only did the proposed two-factor first-order model exhibit adequate model fit, it also performed substantially better when compared to a competing one-factor model. Additionally, the high correlation coefficient between the two first-order factors of the LEIS suggest the existence of a second-order factor (e.g., leader emotional inconsistency) that would explain the overlap in terms of covariance (Kline, 2011). Despite the fact that this second-order factor could not be tested due to SEM software restrictions (Muthén, personal communication,

September 14, 2015), it is concluded that there is sufficient evidence to use the

LEIS as it was theoretically intended.

TABLE 7.7
Standardised Factor Loadings for the 8-Item Version of the LEIS[1]

Items	Happy-Angry	Angry-Happy
Happy-Angry displays		
HA4 happy to irritated	.92	
HA5 happy to aggravated	.88	
HA6 joyful to angry	.94	
HA7 joyful to aggravated	.88	
Angry-Happy displays		
AH4 irritated to happy		.86
AH5 aggravated to happy		.87
AH6 angry to joyful		.94
AH7 aggravated to joyful		.96

[1]All item loadings were statistically significant at p < 0.001

7.4.9 Scale Reliability Re-examination

It is advisable to re-examine the internal consistency of a scale in the

second subsample when splitting the overall sample for scale development

purposes (DeVellis, 2012). This procedure yields important information regarding

scale stability and it rules out that unstable, chance factors had an impact on scale

reliability (DeVellis, 2012). Cronbach's Alpha values for the happy-angry subscale

was .95, the angry-happy subscale .96, and for the overall LEIS .92. Thus, results

regarding the internal consistency for both subscales as well as the overall scale

provided further evidence regarding the reliability and stability of the LEIS.

7.4.10 Assessment of Convergent and Discriminant Validity

At this point in the scale development process the content validity and

reliability of the LEIS have been established by means of EFA. Additionally, the

previously reported CFA provided some evidence as to the construct validity of the

LEIS. In order to gather further evidence of construct validity, the following section

will examine whether the LEIS correlates with measures assessing similar constructs (i.e., convergent validity) and dissimilar constructs (i.e., discriminant validity; Hinkin, 1998). Thus, the following sections briefly outline and test hypotheses regarding the convergent and discriminant validity of the LEIS to the end of providing further evidence as to its overall construct validity.

7.4.10.1 Convergent and Discriminant Validity: Hypothesis Development

To assess the convergent validity of the LEIS, its relationship was examined with theoretically similar measures such as perceived leader inconsistency, leader unpredictability, and leader behavioural integrity because these constructs have either been shown to be related to leader emotional inconsistency in the past or can logically be seen as part of the nomological network of the LEIS (Sinaceur et al., 2013).

In order to assess the discriminant validity of the LEIS, theoretically dissimilar measures were chosen. More specifically, the relationship between the LEIS and perceived leader narcissism as well as follower demographic characteristics was examined.

7.4.10.2 Perceived Leader Inconsistency and Unpredictability

In a series of laboratory experiments Sinaceur and colleagues (2013) showed that their counterparts perceive individuals that alternate between happy and angry emotional displays as inconsistent and unpredictable. Consequently, a measurement scale developed to assess leader emotional inconsistency between happy and angry emotional displays should be positively related to follower perceptions of both inconsistency and unpredictability. Thus, it is hypothesised:

The LEIS is positively related to perceived leader inconsistency and unpredictability.

7.4.10.3 Perceived Leader Behavioural Integrity

Behavioural integrity is defined as the perceived alignment between a manager's words and deeds (Simons, 2002). Behavioural integrity has been proposed to be related to lay constructs such as consistency and hypocrisy (Simons, Friedman, Liu, & McLean Parks, 2007; Simons, 2002). Hypocrisy in turn refers to "inconsistency between talk and action, presentation and results" and can be considered as an antonym of behavioural integrity (Simons, 2002, p. 20). Based on the above discussion, it is evident that behavioural integrity as a construct is likely to be related to leader emotional inconsistency. It is plausible to assume that they are part of the same nomological network in that emotional inconsistency is akin to the antonym of behavioural integrity. Following from this, it is hypothesised: *The LEIS is negatively related to perceived leader behavioural integrity.*

7.4.10.4 Perceived Leader Narcissism

Narcissism is considered to be a personality type characterised by an inflated view of self, fantasies of control, success, and admiration paired with a desire to have this self-love reinforced by others (O'Boyle, Forsyth, Banks, & McDaniel, 2012). Despite the fact that narcissism has in some cases been related to aggression (the similar construct of anger being a part of leader emotional inconsistency) it is unlikely that the LEIS and perceived leader narcissism are related (O'Boyle et al., 2012). This is because individuals are likely to attribute the cause for emotional inconsistency to something in the situation (e.g., their own behaviour) rather than the expresser's personality (Filipowicz et al., 2011). Thus, if observers would not make dispositional attributions regarding emotional inconsistency it is likely that the LEIS would not be related to perceived leader narcissism. It is hypothesised that: *The LEIS is unrelated to perceived leader narcissism.*

7.4.10.5 Demographic Characteristics

To date, there is no compelling theory or evidence to suggest that leader emotional inconsistency is related to follower gender, age, or job tenure. Following the approach of previous studies (Liao & Chuang, 2004) I thus hypothesised that: The LEIS is unrelated to follower gender, age, and job tenure.

7.4.10.6 Measures

Leader emotional inconsistency. Leader emotional inconsistency was measured with the 8-item version of the LEIS. Followers indicated how often the emotional expression of their leader changes from happy to angry in an interaction. The items were scored on a 7-point rating scale, ranging from 1 = *not at all* to 7 = *very often*. As mentioned above, the internal consistency of the LEIS was .92.

Perceived leader inconsistency. Perceived leader inconsistency was assessed using a three-item scale by Sinaceur et al. (2013). A sample item is "Indicate the extent to which your manager generally appears changing". The items were scored on a 7-point rating scale, ranging from 1 = *not at all* to 7 = *very often*. The scale's internal consistency was .90.

Perceived leader unpredictability. Perceived leader unpredictability was assessed using a two-item scale by Sinaceur et al. (2013). A sample item is "Generally, I find it easy to predict my manager's reactions". The items were scored on a 7-point rating scale, ranging from 1 = *not at all* to 7 = *very much*. The scale's internal consistency was .87.

Perceived leader behavioural integrity. Perceived leader behavioural integrity was assessed using a eight-item scale by Simons et al. (2007). A sample item is "There is a match between my manager's words and actions". The items were scored on a 5-point rating scale, ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The scale's internal consistency was .96.

Perceived leader narcissism. Perceived leader narcissism was assessed using a four-item scale by Jonason and Webster (2010). A sample item is "My manager tends to want others to admire him/her". The items were scored on a 5-point rating scale, ranging from 1 = *not at all* to 5 = *very much*. The scale's internal consistency was .89.

Demographic characteristics. The survey additionally measured gender (coded 0 = male, 1 = female), age (in years), and job tenure (in years) as demographic characteristics relevant for the present study.

7.4.10.7 Convergent and Discriminant Validity: Hypothesis Tests

In order to test the convergent validity hypotheses, the LEIS was correlated with perceived leader inconsistency (Sinaceur et al., 2013), perceived leader uncertainty (Sinaceur et al., 2013), and perceived leader behavioural integrity (Simons et al., 2007). Convergent validity was assessed by examining the significance as well as size of zero-order correlations following criteria by Cohen (1988). Accordingly, correlations less than .29 are small, those greater than .30 but less than .49 are medium, and correlations that exceed .50 are large(Cohen, 1988). In line with this, correlations closer to 1.0 are indicative of stronger convergent validity (Carlson & Herdman, 2012).

Results in Table 7.8 show that the LEIS is highly and positively correlated with perceived leader inconsistency (r = .56, p < .01) and perceived leader uncertainty (r = .42, p < .01). Furthermore, as expected the LEIS was also negatively correlated with perceived leader behavioural integrity (r = -.32, p < .01). Taken together, these results support the convergent validity of the LEIS.

In order to provide evidence of discriminant validity of the LEIS, the scale was also correlated with perceived leader narcissism as well as follower demographic characteristics such as gender, age and job tenure. In line with hypotheses, the LEIS was neither significantly related to perceived leader

narcissism (*r* = .07, *n.s.*), nor to the follower demographic characteristics gender (*r* = .11, *n.s.*), age (*r* = -.05, *n.s.*), and job tenure (*r* = -.07, *n.s.*). These results affirm the discriminant validity of the LEIS and are displayed in Table 7.8.

TABLE 7.8
Descriptive Statistics of Study Variables, and Correlations with the LEIS

Variable	*M*	*SD*	1
1. LEIS	2,88	1,26	—
2. Perceived leader inconsistency	2,97	1,52	.56**
3. Perceived leader uncertainty	2,82	1,46	.42**
4. Perceived leader behavioural integrity	3,65	0,97	-.32**
5. Perceived leader nacissism	2,71	1,15	.07
6. Follower gender	3,68	0,72	.11
7. Follower age	3,22	1,35	-.05
8. Follower job tenure	2,41	0,88	-.07

Note. N= 122; * p < .05 level (two-tailed test); ** p < .01 level (two-tailed test).

7.5 DISCUSSION AND CONCLUSION

This chapter illustrated the scale development process with regards to the leader emotional inconsistency scale (LEIS). Based on theory as well as recent research on leader emotional inconsistency between happiness and anger, items were deductively developed for two sub-scales of the LEIS, happy-angry displays and angry-happy displays, respectively (Filipowicz et al., 2011; Frijda, 1986; Sinaceur et al., 2013).

In line with recommendations for scale development, the initial set of items was subjected to a content validity assessment as well as separate expert reviews (DeVellis, 2012). Following from this, a validation study was conducted with the preliminary version of the LEIS comprised of 18 items. For the purposes of scale stability, the overall sample of 250 respondents was randomly split in two subsamples of 128 and 122 respondents, respectively (DeVellis, 2012). The bigger subsample of 128 respondents was used for EFA, whereas CFA was conducted with the smaller subsample of 122 respondents (DeVellis, 2012).

First, the structure of the LEIS was tested using EFA. A subsequent item refinement process led to the shortening of the originally 18-item scale to eight items. In line with theoretical recommendations for shortening the scale length, factor loadings, communalities, and overall Cronbach's Alpha improvement of the LEIS were considered when deciding on which items to drop from the scale (DeVellis, 2012; Hinkin, 1998). Subsequently, results of an additional EFA indicated that the eight items of the LEIS loaded on two factors as expected: happy-angry, and angry-happy displays. Moreover, the LEIS demonstrated adequate internal consistency suggesting that the new measure is reliable.

The LEIS was strongly correlated with theoretically similar constructs such as perceived leader inconsistency, perceived leader uncertainty, and perceived leader behavioural integrity, providing evidence of convergent validity. Additionally, the LEIS was not significantly related to theoretically dissimilar measures such as perceived leader narcissism or follower demographic characteristics, which is indicative of its discriminant validity. In line with recommendations, an assessment of the criterion-related validity of the LEIS will be reported in Chapter 8 using a new sample (Hinkin, 1998).

Taken together, the findings presented in this chapter demonstrate both the reliability as well as the validity of the LEIS.

CHAPTER 8:

THE TWO-FACED LEADER: EFFECTS OF LEADER EMOTIONAL INCONSISTENCY ON EMPLOYEE CREATIVE PERFORMANCE

FIELD STUDY

8.1 CHAPTER SUMMARY

This chapter summarises the conduct and analysis of a weekly diary study. Its objective was twofold. First, the study sample was used to further assess the validity of the leader emotional inconsistency scale (LEIS), the development and initial validation of which was reported in Chapter 7. Second, the weekly diary study was conducted to provide external validity to the research model of this thesis. The chapter will begin with a theory and hypothesis section adapted to the within-person (i.e., weekly) level in contrast to the hypothesis sections of the experimental studies presented in Chapters 5 and 6. After this, the methods section is presented, which includes detailed descriptions regarding the context of the study sample, the measurement scales used, as well as a section on the further validation of the LEIS including results of multilevel confirmatory factor analyses (MCFA). The subsequent results section describes the analytical strategy used, as well as general study findings. Finally, the chapter features a discussion on theoretical and practical implications, which complement the findings of experimental studies 1 and 2 discussed in Chapters 5 and 6.

8.2 THEORY AND HYPOTHESES

The conceptual model of this study is depicted in Figure 8.1 and is equivalent to the conceptual models of the studies discussed in Chapters 5 and 6 with the exception that the current study is a field study with a weekly diary design (see Bolger, Davis, & Rafaeli, 2003 for an overview of diary study designs). In the following, week-level hypotheses will be developed that reflect the multilevel nature of the present field study. In line with the other studies reported within this thesis, I

base my theoretical predictions on the Emotions as Social Information theory (e.g., van Kleef, de Dreu, & Manstead, 2009). Since the aim of this field study is to both provide external validity to the overall research model of this thesis as well as to further validate the LEIS (i.e., in terms of its criterion-related validity), the tests of the hypotheses that will be developed in the following will serve both purposes.

FIGURE 8.1
Conceptual model for the field study.
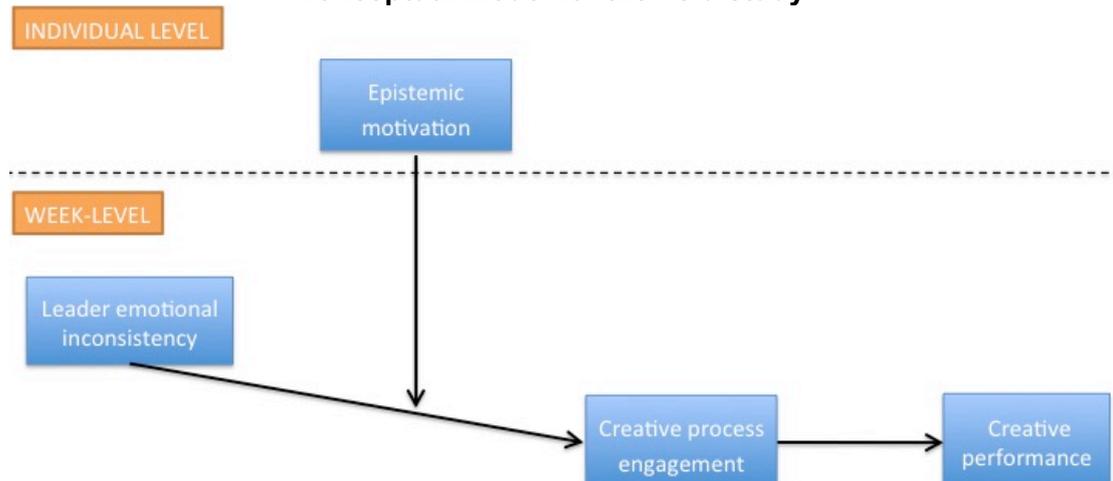
8.2.1 Adopting a Week-Level Approach to Leadership and Creativity Research

In this weekly diary study, I aimed at examining the within-person relationships between leader emotional inconsistency and follower creative performance for several reasons. First, adopting a within-person lens in the examination of the effects of leadership on follower performance outcomes allows researchers to account for fluctuations with regards to both constructs over time and is particularly useful when attempting to investigate the processes underlying these relationships (Dalal et al., 2014; Hoffman & Lord, 2013). Second and specifically related to the current investigation, within-person research reduces recall bias as diary studies assess study variables closer to the conclusion of the events under investigation (e.g., the display of certain leader behaviours shortly after the event; Ohly, Sonnentag, Niessen, & Zapf, 2010). This is particularly

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important if the object of research is complex emotional leader behaviour as recall bias tends to be inflated for these constructs thus reducing the accuracy of ratings obtained and the validity of measurement scales used (Fong, 2006; Hansbrough et al., 2015).

Having established the utility of a within-person approach for the current study, the determination of the type of time frame used (e.g., within-day, daily, or weekly) for within-person investigations of leadership and creative performance poses a somewhat contradictory challenge. Whilst it appears useful to adopt a within-day or even event-level approach to assess leader emotional expressions (Hoffman & Lord, 2013), it is questionable whether a within-day or daily approach represents a suitable time frame for the investigation of creative behaviours, particularly when the aim is to obtain more objective manger ratings of creative performance (Ng & Feldman, 2012). Despite the fact that past research has shown the existence of daily fluctuations in creative thought (e.g., Amabile, Barsade, Mueller, & Staw, 2005), the variety of behaviours that need to be displayed to be engaged in the creative process (e.g., problem identification, information searching and encoding, as well as idea and alternative generation; Zhang & Bartol, 2010a) as well as the time frame needed to realistically receive external managerial recognition of a creative outcome (i.e., manager-rated creative performance) are likely to be separated by several days or even weeks (Madrid, Patterson, & Birdi, 2014). To resolve this apparent contradiction I decided to adopt a week-level approach for my investigation of leader emotional inconsistency, follower creative process engagement, and manager-rated creative performance. Past research has already started to investigate weekly fluctuations in leadership (Breevaart, Bakker, Demerouti, & Derks, 2016) as well as weekly fluctuations in idea generation and implementation (Madrid et al., 2014).

Therefore, I am confident that adopting a week-level approach to investigate the effect of leader emotional inconsistency on follower creative

performance does neither compromise the accuracy of follower ratings of leader behaviour nor the meaningfulness of manager ratings of follower creative performance and thus represents an adequate solution to overcome the aforementioned contradiction.

8.2.2 Weekly Leader Emotional Inconsistency

I define weekly leader emotional inconsistency as *weekly changes in leader expressions that fluctuate between happy and angry emotions over the course of a single encounter* (Frijda, 1986; Sinaceur et al., 2013). Compared to the definition provided in Chapter 5, terms such as fluctuation and change may be interpreted in two distinct ways. The first interpretation relates to the fluctuation or alternation between the two discrete emotions of happiness and anger that make up the inconsistent emotional expression (Sinaceur et al., 2013). And secondly, weekly (i.e., within-person) fluctuations over time indicate that I am interested in the investigation of weekly changes in leader emotional inconsistency (Bolger et al., 2003).

My weekly field study answers a call by van Kleef et al. (2012), who emphasised the need for field research on leader emotional expressions that incorporates the examination of how leader emotional influence unfolds over time. I chose to investigate weekly creative performance as the outcome of my study because it is a relevant organisational performance indicator that has been shown to exhibit substantial within-person fluctuations (Amabile et al., 2005; Madrid et al., 2014; To et al., 2012).

I draw from EASI theory (van Kleef, 2009) to investigate the interpersonal effects of weekly leader emotional inconsistency on weekly follower creativity and chose the discrete emotions of happiness and anger to induce emotional inconsistency. For a more fine-grained discussion on the theoretical background of this thesis I refer to Chapter 5.

8.2.3 Epistemic Motivation as a Cross-Level Moderator of the Week-Level Leader Emotional Inconsistency – Creative Process Engagement Relationship

I define creativity as a process outcome (e.g. products, services) that is both novel and useful (Amabile, 1983). Several scholars suggested to study the processes or behaviours that are instrumental for creative outcomes (i.e., creative process engagement) as a more proximal outcome of creative functioning (Amabile & Mueller, 2008; Gilson & Shalley, 2004). Past research has also shown that creative process engagement exhibits substantial within-person variability (To et al., 2012). For these reasons, the current research investigates weekly creative process engagement as a more proximal creative outcome of weekly leader emotional inconsistency.

Drawing from EASI theory (van Kleef et al., 2012), I propose that followers with high- and low levels of epistemic motivation differ in their weekly creative process engagement when they observe weekly leader expressions of emotional inconsistency because of their differing information processing capabilities. Epistemic motivation is defined as the desire to develop a rich and accurate understanding of situations (Kruglanski, 1989), which is why followers high on epistemic motivation engage in more thorough information processing and are thus more able to infer meaning from leader emotional expressions than their low epistemic motivation counterparts (Kruglanski & Webster, 1996; van Kleef et al., 2012). In this study, I investigated weekly leader displays of emotional inconsistency between the discrete emotions happiness and anger, both of which carry distinct social information (van Kleef et al., 2012). Past studies highlighted that followers with high levels of epistemic motivation infer from leader anger a dissatisfaction with current performance levels and a need for change, which in turn can lead followers to invest more effort into their work (Sy et al., 2005; van

Kleef et al., 2010). Inferences from leader happiness signal a favourable work environment characterised by satisfaction with current performance levels (van Kleef, 2014; van Kleef, Homan, et al., 2009). Following from this, weekly leader expressions of emotional inconsistency involving happy and angry displays could therefore send out social signals related to both happiness and anger, for example satisfaction and dissatisfaction with regards to weekly performance levels.

For followers with high epistemic motivation these performance inferences may appear contradictory in that they disconfirm their initial expectations e.g. happy displays convey satisfaction whereas subsequent angry displays send out opposite social signals and vice versa. I propose that these contradictory social signals trigger divergent thought patterns in followers with high levels of epistemic motivation that ultimately increase their weekly creative process engagement (i.e., creativity-relevant cognitive processes; Zhang & Bartol, 2010a). In support of my theoretical stance, social psychology research has shown that if people or events are inconsistent and disconfirm observers' expectancies, this can increase their creative cognition when observers have a low need for structure (akin to high epistemic motivation; Gocłowska et al., 2014).

Conversely, followers with low epistemic motivation would not be able to infer social information from weekly leader emotional expressions (Van Kleef et al., 2011). According to EASI theory, low-epistemic motivation followers would process leader displays of inconsistency between happiness and anger via the affective reactions pathway (e.g., via emotional contagion; van Kleef et al., 2012). I hypothesise that in this case the impact of weekly leader emotional inconsistency on followers would results in an additive effect consisting of the independent effects of happy and angry displays. Since past research showed a positive effect of leader happiness (Visser et al., 2013) as well as a negative effect of leader anger (van Kleef et al., 2010) on follower creativity when processed via the affective pathway, I expect that in the case of weekly leader emotional inconsistency the

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respective positive effect of leader happiness and negative effect of leader anger cancel each other out. Consequently, for followers with low epistemic motivation I propose that their weekly creative process engagement remains unchanged after observing weekly leader displays of emotional inconsistency between happiness and anger.

In sum, these arguments suggest that weekly leader emotional inconsistency increases weekly creative process engagement for followers with high as opposed to low levels of epistemic motivation.

Hypothesis 1: Within individuals, follower epistemic motivation moderates the relationship between weekly leader emotional inconsistency and weekly creative process engagement, such that weekly leader emotional inconsistency will be positively related to weekly creative process engagement when follower epistemic motivation is high but will be unrelated when follower epistemic motivation is low.

8.2.4 The Multilevel Moderated Mediating Role of Epistemic Motivation

Furthermore, as an extension of Hypothesis 1 I propose a multilevel moderated mediation model of weekly leader emotional inconsistency and weekly follower creative performance. More specifically, I argue that weekly leader emotional inconsistency has a positive indirect effect on weekly creative performance for followers with high levels of epistemic motivation through a positive effect of weekly leader emotional inconsistency on weekly creative process engagement as well as a positive effect of weekly creative process engagement on weekly creative performance. Past research has already established a positive relationship between creative process engagement and creative performance (e.g., Zhang & Bartol, 2010a). In line with my previous argumentation, weekly leader emotional inconsistency is likely to trigger cognitive reactions and an upsurge in divergent thought patterns for followers with high levels of epistemic motivation,

increasing their weekly creative process engagement as well as subsequent weekly creative performance (Gocłowska et al., 2014; Zhang & Bartol, 2010a). In contrast, weekly leader emotional inconsistency is proposed to be unrelated to weekly creative performance for followers with low levels of epistemic motivation because in this case the positive effect of leader happy displays and the negative effect of leader angry displays cancel each other out (van Kleef et al., 2010; Visser et al., 2013). Thus, I suggest that weekly leader emotional inconsistency will be unrelated to weekly creative process engagement as well as that weekly creative process engagement will be unrelated to weekly creative performance for followers with low levels of epistemic motivation.

> *Hypothesis 2: Within individuals, for high epistemic motivation followers, weekly creative process engagement mediates a positive relationship between weekly leader emotional inconsistency and weekly creative performance, whereas, for followers with low levels of epistemic motivation there is no relationship between weekly leader emotional inconsistency and weekly follower creative performance via weekly follower creative process engagement.*

8.3 METHODS

8.3.1 Sample and Data Collection

Study participants were employees and managers of two small to medium-sized organisations from the UK insurance and care sector, respectively. Despite the fact that creative performance has predominantly been examined in R&D or artistic contexts, it is important to note that creative performance is relevant across a wide variety of jobs and industries (Perry-Smith, 2006; Shalley, Gilson, & Blum, 2000). Since previous research has already investigated creativity and innovation in both the insurance (Gong et al., 2009) as well as the care context (West &

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Anderson, 1996; West et al., 2003), I am confident that my sample is appropriate for the intended investigation.

Data collection involved the administration of a general survey to measure time-invariant variables (e.g., epistemic motivation) as well as a series of diary surveys to measure time-variant variables (e.g., weekly changes in leader emotional inconsistency and employee creative performance). In the general survey, employee – manager dyads were asked to provide their informed consent to participate in the study and to fill out a questionnaire. Employees indicated their general levels of epistemic motivation, as well as positive and negative affectivity. Managers were required to rate their employee's general levels of creative performance. The diary period, in turn, involved said employee – manager dyads to each complete a short questionnaire at the last day of a working week, for five consecutive weeks. Employees were asked to rate their manager's displayed emotional inconsistency as well as their own levels of creative process engagement, fatigue, and perceived time pressure for the respective week that just ended. Managers, in turn, rated their employee's creative performance during the same time period. As part of a pre-survey information package, employees were advised not to complete the weekly survey for weeks in which they did not interact with their manager. The weekly surveys began approximately one week after the general survey has been completed.

All surveys were administered over the Internet. Participants received links to general and weekly questionnaires via e-mail. In case participants did not have an e-mail account, links were sent via text message to mobile devices with Internet capability (e.g., smart phones). Importantly, research shows that web-based research both via e-mail and smart phones yields reliable, high-quality data (Gosling, Vazire, Srivastava, & John, 2004; Ilies, Aw, & Lim, 2016; Miller, 2012). In collaboration with an HR representative of each organisation, employees and managers were asked to self-assign a six-digit code consisting of their initials and

their year of birth. So-called *employee and manager codes* along with e-mail addresses (or alternatively phone numbers) of study participants were made available to the principal investigator in order to send out questionnaire links and to be able to match employee and manager ratings after data collection was finalised. In exchange for study participation, Amazon gift vouchers worth £100 in total per participating organisation were raffled off to employees. In addition, a workshop on effective nonverbal communication was delivered to participating managers after the research project concluded.

A total of 89 participants (ten managers and 79 employees) expressed interest in the study after the aforementioned HR representative circulated an information sheet and I received usable data from 70 of them (ten managers and 60 employees). In total, I received 253 matched weekly employee and manager responses out of a possible 395 (64% response rate). 142 matched weekly responses had to be discarded because either one or both members of the employee – manager dyad did not fill out the respective questionnaires. The employee sample consisted of 13 men and 47 women with a mean age of 35.97 (*SD* = 9.70). On average, employees spent 1.87 years in higher education (*SD* = 1.80), had 8.14 years (*SD* = 6.94) of work experience, 5.67 years (*SD* = 4.36) of which they have already worked with their current manager. The manager sample consisted of three men and seven women with mean age of 49.40 years (*SD* = 9.79), who on average spent 2.05 years (*SD* = 1.83) in higher education, and had 11.7 years (*SD* = 9.51) of work experience.

8.3.2 Measures

The administered general and weekly surveys can be found in Appendix C and D for managers and in Appendix E and F for employees, respectively. The measurement scales used along with their sources have additionally been listed under Appendix G.

General survey measures. As mentioned previously, the general survey was used to measure employee trait data (e.g., epistemic motivation, positive and negative affectivity) as well as leader ratings of the general level of employee creative performance.

General perceptions of leader emotional inconsistency. General employee perceptions of leader emotional inconsistency was measured using the leader emotional inconsistency scale (LEIS) developed for this study. The development and initial validation of the LEIS has been reported in Chapter 7 of this thesis. Employees were asked to rate how often their manager's emotional expression changed when interacting with them in general with respect to 8 items reflecting a transition between leader expressions of happiness and anger (or vice versa). Sample items include "happy to irritated" and "joyful to angry". Ratings were made on a 7-point scale ranging from 1= *not at all* to 7= *very often*. The internal consistency for the LEIS was .97.

General employee epistemic motivation. Following from the fact that epistemic motivation reflects a stable trait-like predisposition for information processing rather than a transient state, in this diary study I chose to measure it accordingly as a trait (van Kleef et al., 2012). In line with past research (e.g., van Kleef et al., 2009), a 11-item need for structure scale (Neuberg & Newsom, 1993) was used to measure employee levels of epistemic motivation. A sample item is "It upsets me to go into a situation without knowing what I can expect from it". Items were scored on a 5-point rating scale, ranging from 1= strongly disagree to 5= strongly agree. In order to facilitate the interpretation of findings, the responses were recoded so that higher scores reflect higher levels of epistemic motivation (see van Kleef et al., 2009; van Kleef, Anastasopoulou, & Nijstad, 2010 for a similar approach). Internal consistency of the scale was .95.

General control variables. I controlled for employee general levels of positive and negative affectivity in this study for two reasons. First, despite the fact

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that general affectivity constitutes a dispositional tendency to experience affective states, affective dispositions on one hand and states on the other are likely to have differential effects in a leader-follower interaction (van Knippenberg & van Kleef, 2016). Second, past research showed that follower affectivity can influence the relationship between leader behaviours and follower creative performance (Gilmore, Hu, Wei, & Tetrick, 2013). To ensure that the effects reported in this study are not due to an affective predisposition on the side of the employee I used the Positive and Negative Affect schedule (Watson et al., 1988) to control for dispositional positive and negative affectivity. For this purpose, employees were asked to provide ratings on how they felt in general with respect to 10 positive (e.g., excited, interested, proud) and 10 negative (e.g., distressed, upset, nervous) adjectives. Ratings were made on a 5-point rating scale, ranging from 1= *not at all* to 5= *extremely*. Internal consistency for both positive and negative affectivity was .97. I further controlled for both general levels of creative process engagement and creative performance in my analyses to ensure that I adequately capture the impact of weekly fluctuations of said variables independently of general predispositions to engage in creative behaviours or to perform creatively (Ohly et al., 2010). I measured general creative process engagement using six-items from an 11-item scale developed by Zhang and Bartol (2010). In line with previous research, I selected six items (i.e., two from each of the three dimensions of creative process engagement) from the original scale that could be expected to vary in the short term and would thus be suitable for diary research (see To, Fisher, Ashkanasy, & Rowe, 2012 for a similar approach). A sample item is "Generally, I try to devise potential solutions that move away from established ways of doing things". Items were scored on a 5-point rating scale ranging from 1= *not at all like me* to 5= *very much like me*. Internal consistency was .96. Furthermore, I measured manager-rated general employee creative performance using a three-item scale by Oldham and Cummings (1996). In order for managers to know which

employee they are rating, I included the aforementioned six-digit *employee code* in every leader-rated item. A sample item is "How original and practical is *employee code*'s work in general? Original and practical work refers to developing ideas, methods, or products that are both totally unique and especially useful to the organization". Managers rated their employees on a 7-point rating scale, ranging from 1= *not at all* to 7= *very much*. The scale's internal consistency was .98. Finally, I controlled for company membership, which was dummy coded (0= insurance company, 1= care company) to ensure that study results are not influenced by employee differences in company membership.

Diary survey measures. In the following, both employee and manager week-level measures will be reported. In line with previous research, the time frame of all scale items used has been adapted so that they referred to the week and could be used to measure my study variables on a weekly level (cf. Breevaart, Bakker, Demerouti, & Derks, 2016; Ohly, Sonnentag, Niessen, & Zapf, 2010). Internal consistencies for week-level variables were averaged across all measurement occasions.

Week-level perceptions of leader emotional inconsistency. Week-level employee perceptions of leader emotional inconsistency were measured using the LEIS. Employees were asked to rate how often their manager's emotional expression changed when interacting with them during the respective week with respect to 8 items reflecting a transition between leader expressions of happiness and anger (or vice versa). Sample items include "happy to irritated" and "joyful to angry". Ratings were made on a 7-point scale ranging from 1= *not at all* to 7= *very often*. The mean internal consistency was .99 (ranging between 98 and .99 across weekly measurement occasions).

Week-level creative process engagement. Week-level creative process engagement was measured by 6 items from an 11-item scale developed by Zhang and Bartol (2010). As mentioned previously, I selected six items (i.e., two from

each of the three dimensions of creative process engagement) from the original scale by Zhang and Bartol (2010) that could be expected to vary in the short term and would thus be suitable for diary research (cf To, Fisher, Ashkanasy, & Rowe, 2012). A sample item is "This week, I was trying to devise potential solutions that move away from established ways of doing things". Items were scored on a 5-point rating scale ranging from 1= *not at all like me* to 5= *very much like me*. The mean internal consistency was .96 (ranging between .91 and .98).

Week-level manager rated creative performance. I measured week-level creative performance by administering the three-item scale by Oldham and Cummings (1996) to managers. I followed the same procedure as in the general survey and included the six-digit *employee code* in every manager-rated item so that managers knew which employee they were rating. A sample item is "How original and practical is *employee code*'s work this week? Original and practical work refers to developing ideas, methods, or products that are both totally unique and especially useful to the organization". Ratings were made by managers on a 7-point scale, ranging from 1= *not at all* to 7= *very much*. The scale's mean internal consistency was .97 (ranging between .94 and .98).

Week-level control variables. I controlled for employee week-level perceptions of leader happiness as well as anger due to past research evidence showing that displays of complex emotional expressions involving both happiness and anger (e.g., emotional ambivalence) are correlated with their univalent parts (i.e., happiness and anger individually; Rothman & Melwani, in press). To control for this, I asked employees to rate whether their managers constantly displayed certain emotions this week with respect to three-item scales reflecting happiness and anger, respectively, by van Kleef et al. (2006). Sample items include "happy" to measure leader displays of happiness as well as "angry" to measure leader displays of anger. Ratings were made on a 7-point scale, ranging from 1= *not at all* to 7= *very often* and the mean internal consistency for weekly leader happiness

was .96 (ranging between .89 and .98) as well as .93 (ranging between .81and .98) for weekly leader anger. I also controlled for employee weekly changes in fatigue and time pressure. This was done based on theoretical considerations regarding the undermining effect of situational fatigue and time pressure on displayed epistemic motivation (Kruglanski & Webster, 1996; van Kleef et al., 2012). I controlled for this by asking employees to rate their week-level fatigue using a two-item scale developed by Beal et al. (2013). A sample item is "This week, I felt drained/exhausted". Ratings were made on a 7-point scale, ranging from 1= *strongly disagree* to 7= *strongly agree* and the mean internal consistency was .84 (ranging between .65 and .91). Additionally, I measured week-level time pressure using a four-item scale by Maruping et al. (2015). A sample item is "This week, I was under a lot of pressure to complete my tasks on time". Employees rated the items on a 7-point scale, ranging from 1= *strongly disagree* to 7= *strongly agree* and the mean internal consistency was .95 (ranging between .86 and .98).

8.3.3 Further Validation of the LEIS

After having reported results from both an exploratory (EFA) and a confirmatory factor analysis (CFA) in Chapter 7 that provided initial evidence regarding the structure of the LEIS, this section provides further evidence regarding the scale's construct validity. Further validation of the LEIS was warranted for several reasons. First, the previously conducted CFA merely provides evidence of construct validity for the conceptualisation of the LEIS on the between-person level of analysis (i.e., the level of the individual). However, the LEIS was developed to assess weekly changes in displayed leader emotional inconsistency, which raises the question of whether the factor structure of the LEIS replicates when it is adapted to be used on the weekly level. To prevent misalignment between theory and measurement, which has been shown to be a widespread issue in leadership research (Gooty, Serban, Shumski, Gavin, & Yammarino, 2012; Yammarino, Dionne, Uk, &

Dansereau, 2005), I examined the factor structure of the LEIS on both the

between-person (i.e., individual level) and the within-person level (i.e., week-level)

and report results of a multilevel confirmatory factor analysis (MCFA; Muthén,

1994) to establish construct validity across levels of analysis.

8.3.3.1 Theoretical Justification and Results of Multilevel Confirmatory Factor Analyses Regarding the LEIS

In order to justify current and future research on weekly leader emotional

inconsistency using the adapted version of the LEIS as reported under section

8.3.2 a MCFA was conducted.

In regard to theoretical and conceptual considerations regarding the

measurement of leader emotional inconsistency, I do not assume that general (i.e.,

the between-person level conceptualisation of the LEIS) and weekly leader

emotional inconsistency (i.e., the within-person conceptualisation of the LEIS) are

conceptually different, however, I propose that weekly measurements are likely to

more accurately reflect the true impact of leader emotional inconsistency on

employee work-related outcomes. This is because weekly measurements

(compared to generalised trait assessments) more readily capture leader reactions

to work events as well as subsequently displayed verbal and nonverbal behaviour

(Hoffman & Lord, 2013; Ohly et al., 2010). Furthermore, weekly measurements

reduce concerns regarding recall bias, which can negatively influence the accuracy

of leadership ratings (Hansbrough et al., 2015). Concerns regarding recall bias

may be particularly heightened for leader behaviour involving complex emotions

such as emotional ambivalence or inconsistency as those behaviours are more

difficult to recall (Fong, 2006). As previously mentioned, due to the fact that I do not

assume conceptual differences between the between-person factor structure (i.e.,

differences between individuals) as well as the within-person factor structure (i.e.,

weekly deviations) of the LEIS, the analysis reported in the following will be confirmatory in nature.

Measures. I used the general as well as weekly version of the LEIS as reported under section 8.3.2 to conduct a MCFA. The sole difference between the general and weekly version is the adaptation of the time frame of the respective items so that they referred to the weekly level (see Breevaart et al., 2016; Ohly et al., 2010 for a similar approach).

8.3.3.2 Analytical Strategy

Confirmatory factor analysis (CFA) is a tool suitable for assessing how well a hypothesised model structure fits the data collected (Byrne, 2010). This is particularly important in case new measurement scales are developed as CFA can provide further evidence towards construct validity (DeVellis, 2012). When looking at the factor structure of a person-level construct, leadership researchers usually perform a CFA based on either the total covariance matrix of the entire sample or alternatively based on the sample between-person matrix only (Dyer, Hanges, & Hall, 2005). This approach is problematic as it fails to accurately assess the within-person level factor structure of the construct of interest (Muthén, 1994), in this case weekly leader emotional inconsistency. To counter problems associated with past approaches, Muthén (1994) therefore developed the multilevel confirmatory factor analysis procedure (MCFA), which uses the within- and between-person covariances matrices of a sample simultaneously to be able to accurately examine the quality of a construct's multilevel factor structure. Results of an exploratory factor analysis reported in Chapter 7 suggested that eight items of the LEIS loaded on two factors (i.e., happy-angry displays and angry-happy displays, respectively). Thus, in order to confirm the LEIS's proposed factor structure using an independent sample a MCFA was conducted (Hinkin, 1998).

In order to perform the MCFA I used Mplus Version 7 (Muthén & Muthén, 1998-2012) and maximum likelihood estimation in line with recommendations by Heck and Thomas (2015). I assessed factor loadings of individual items as well as the overall model fit for two competing models to the end of examining the LEIS's construct validity (DeVellis, 2012). Theoretically, leader emotional inconsistency measured by the LEIS can be considered a second-order construct with two underlying factors: happy-angry emotional displays, and angry-happy emotional displays. However, since Mplus requires at least three first-order factors to be identified to construct a second-order factor (Muthén, personal communication, September 14, 2015), the conduct of a second-order MCFA with two first order factors was not possible. Instead, I compared the model fit of two first-order models: a first order two-factor model (e.g., including one LEIS factor on both the between-person as well as the within-person level) as well as a first order four-factor model (e.g., including a happy-angry and a angry-happy factor on both the between-person as well as the within-person level). With regards to the latter model, I examined the correlation between the two proposed first-order factors (i.e., happy-angry emotional displays, and angry-happy emotional displays) as an indication of a potential second-order factor (Kline, 2011).

I used the same fit indices as in Chapter 7 to assess the quality of the multilevel factors structure of the LEIS. More specifically, I examined the chi-square (χ^2), which indicates the quality of model fit by comparing an estimated covariance matrix based on the hypothesised model with the actual covariance matrix of the data collected (cf. recommendations of Hinkin, 1998). Since the chi-square statistic is heavily influenced by sample size (Heck & Thomas, 2015), more robust fit indices were examined for a conclusive model fit assessment. Specifically, I looked at the comparative fit index (CFI), the root mean square error of approximation (RMSEA), the standardised root mean square residual (SRMR), and the Tucker-Lewis Index (TLI). CFI and TLI values between .90 and .95 can be considered a

good fit, whereas values over .95 reflect excellent fit (Byrne, 2010; Hu & Bentler, 1999). Regarding the SRMR, values of up to .10 are considered acceptable and values of less than .08 constitute good fit (Hu & Bentler, 1999; Schweizer, 2010). An RMSEA of less than .08 are considered acceptable, whereas values below .05 are considered high (Browne & Cudeck, 1993). However, since recent research shows that the RMSEA can be biased for models with small degrees of freedom (df; Kenny, Kaniskan, & McCoach, 2014), which applies in this case (e.g., df for the subsequent models are 38 and 40), I will not consider RMSEA values in my assessment of model fit for this analysis. Finally, to compare the fit of different models, I used the Bayesian information criterion (BIC), where lower values indicate a better fit (Heck & Thomas, 2015).

8.3.3.3 MCFA of the LEIS's Multilevel Factor Structure

I initially computed the intraclass correlation coefficient (*ICC(1)*; Hox, 2010) to determine whether the use of multilevel analyses is justified. The *ICC(1)* stands for the amount of between-person variability compared to the amount of total variability (Snijders & Bosker, 2012). Calculating the *ICC(1)* based on the null model (i.e., the intercept-only model) demonstrated that 40% of the total variance in perceived leader emotional inconsistency was due to differences within individuals, whilst the remaining 60% was due to differences between persons. This finding indicates that leader emotional inconsistency varied both within and between person, thus justifying my multilevel approach (Snijders & Bosker, 2012).

Next, the MCFA was performed. Results showed that for both competing models (i.e., the first-order two-factor and four-factor models) all item loadings were significant and loaded higher than .80 on their intended factors, which is in line with recommendations (DeVellis, 2012). Detailed factor loadings for the LEIS on both the between-person and the within-person levels are reported in Table 8.1.

TABLE 8.1
Standardised Factor Loadings for the LEIS on the Between- and Within-Person Level[1]

Items	Happy-Angry	Angry-Happy
Between-Person Level		
HA1 happy to irritated	.80	
HA2 happy to aggravated	.89	
HA3 joyful to angry	.93	
HA4 joyful to aggravated	.96	
AH1 irritated to happy		.79
AH2 aggravated to happy		.93
AH3 angry to joyful		.91
AH4 aggravated to joyful		.94
Within-Person Level		
HA1 happy to irritated	.97	
HA2 happy to aggravated	.96	
HA3 joyful to angry	.97	
HA4 joyful to aggravated	.97	
AH1 irritated to happy		.97
AH2 aggravated to happy		.97
AH3 angry to joyful		.97
AH4 aggravated to joyful		.96

[1]All item loadings were statistically significant at $p < 0.001$

MCFA results for the proposed first-order two-factor model showed adequate model fit ($\chi^2(40) = 260.33$, p <.001, TLI = .94, CFI = .96, SRMR within = .01, SRMR between = .03, RMSEA = .15). The first-order four-factor model showed an even better fit to the data ($\chi^2(38) = 103.23$, p <.001, TLI = .98, CFI = .99, SRMR within = .01, SRMR between = .02, RMSEA = .08). The BIC for the four-factor model (BIC = 6197.47) was lower compared to the two-factor model (BIC = 6343.51) indicating that the four-factor model fits the data slightly better than the proposed two-factor model. Furthermore, in the four-factor model a substantial correlation was observed between the first-order factors happy-angry displays and angry-happy displays on both the between-person ($r = .93$) and the within-person level ($r = .98$). A correlation of this magnitude is indicative of a second order factor in line with the theoretical argumentation of the LEIS (Kline, 2011). Due to the fact

that both of the competing models satisfy my assessment of model fit and considering the high correlation between the first-order factors in the four-factor model, I concluded that there is sufficient evidence to use the LEIS as it was theoretically intended (i.e., as a second-order factor) on both the between-person as well as the within-person level.

8.3.4 Measurement Model of the Current Study

Before I can actually test hypothesised relationships between latent (i.e., unobserved) variables, I need to assess the proposed measurement model of the current study to confirm that the observed measures specified under section 8.3.2 are conceptually distinct and valid measures of the constructs I intend to measure (Heck & Thomas, 2015). For the purposes of determining the adequacy of the measurement model for the present field study I conducted further MCFAs. The procedure tests whether the measurement model is misspecified, in which case a well-fitting model cannot be observed (Muthén, 1994). I used the same indicators as previously described in section 8.3.3.2 to assess model fit. Specifically, I examined the chi-square (χ^2), CFI, TLI, RMSEA, SRMR (between and within), and BIC indices to assess the adequacy of model fit. I also computed the *ICC(1)* value for all weekly variables measured to see whether a multilevel analytic approach is warranted (Snijders & Bosker, 2012). Table 8.2 lists the proportion of variance in each of the examined constructs at the within-person (i.e., weekly) level. The results show that within-person constructs exhibited considerable variance at the weekly level, ranging from 40% to 74%, thereby justifying my multilevel approach.

TABLE 8.2
Percentage of Within-Individual Variance among Weekly Variables

Construct	Within-Individual Variance (%)[a]
Leader emotional inconsistency	40%
Leader happiness	48%
Leader anger	74%
Time pressure	58%
Fatigue	52%

[a] The percentage of within-individual variance was calculated as $e^2/(e^2 + r^2)$; e^2 = within-individual variance ; r^2 = between-individual variance.

Due to the fact that several models may fit the same dataset, I followed recommendations made by Thompson (2004) and tested competing models to ensure that my proposed measurement model yields superior model fit. Thus, I compared my theoretically derived first-order 11-factor model (including within-person factors for leader happiness, leader anger, leader emotional inconsistency, fatigue, time pressure, creative process engagement, creative performance as well as between-person factors for epistemic motivation, positive affectivity, negative affectivity, and general creative performance) with a plausible competing first-order nine-factor model (including within-person factors for leader consistent emotions, leader emotional inconsistency, fatigue, time pressure, creativity as well as between-person factors for epistemic motivation, positive affectivity, negative affectivity, as well as general creative performance). In comparison with the theoretically derived model, for the competing model I combined measures of leader happiness and leader anger to form a leader consistent emotions factor (see Sinaceur, Adam, Van Kleef, & Galinsky, 2013 for a similar approach). Furthermore, I combined theoretically similar measures of creative process engagement and creative performance to form a creativity factor as past research consistently showed high correlations between the two variables (Zhang & Bartol, 2010a, 2010b).

MCFA results showed that for the theoretically derived first-order 11-factor model all items significantly loaded on their indented factor with the lowest factor loading being .54, which satisfies the common cut-off criteria of .40 proposed by Hinkin (1995). In regard to model fit, MCFA results showed adequate results for the first-order 11-factor model ($\chi^2(877)$ = 1993.22, p <.001, TLI = .92, CFI = .92, SRMR within = .04, SRMR between = .10, RMSEA = .07, BIC = 22531.07). MCFA results for the competing first-order nine-factor model showed that not all items loaded significantly on their intended factors. More specifically, the leader anger items did not load on the consistent leader emotions factor. Furthermore, the competing model did not fit the data as well as the theoretically derived model, which is demonstrated by model fit indices that do not meet common cut-off criteria ($\chi^2(888)$ = 3584.264, p <.001, TLI = .80, CFI = .82, SRMR within = .21, SRMR between = .10, RMSEA = .11, BIC = 24061.24). Moreover, the BIC of the theoretically derived model was lower compared to the competing model, which provides further evidence towards the relative superiority in model fit of the theoretically derived model (Heck & Thomas, 2015). Lastly, I attempted to compare my theoretically derived model with a competing first-order two-factor model (i.e., with one factor on each level of analysis). However, this model did not reach convergence, which in itself can be an sign of model misspecification (Heck & Thomas, 2015). Therefore, I rejected the possibility that a first-order two-factor model would yield superior model fit compared to the theoretically derived first-order 11-factor model. In sum, MCFA results support my view that the theoretically derived first-order 11-factor model fits the data best and can thus be used to examine hypothesised relationships between observed study variables.

8.4 RESULTS

The following sections will outline my analytical approach with regards to hypothesis testing as well as study findings obtained. In doing so, my aim is twofold. First, after having successfully examined the multilevel factor structure of the LEIS in section 8.3.3.3 I intended to provide evidence of the LEIS's criterion-related validity as a final piece of evidence towards its construct validity. Second, I intended to test my research hypotheses using a field sample to provide external validity to the research model of this thesis.

8.4.1 Analytical Strategy

Because of my nested data structure (i.e., weeks at Level 1 were nested within persons at Level 2), I tested my hypotheses using multilevel modeling following the unconflated multilevel model (UMM) approach proposed by Preacher, Zyphur, and Zhang (2010). The UMM approach yields more accurate parameter estimates compared to the traditional multilevel modeling (MLM) approach because it acknowledges that the effect of a Level 1 (i.e., within-person level) predictor on a Level 1 outcome can be separated into two parts, the within-person effect and the between-person effect, respectively (Preacher et al., 2010). This circumstance is particularly important for my weekly diary study as the reliability of results obtained by diary designs relies heavily on the estimation accuracy of effects on the within-person level of analysis (Bolger et al., 2003; Ohly et al., 2010). Traditional MLM combines both the within-person and between-person effect into a single slope, which results in a conflated effect that will have an upward or downward bias in most cases except for the very unlikely situation that the within- and between-person effects are exactly the same (Lüdtke et al., 2008). The UMM approach, in turn, safeguards against the conflation of effects by separating the within- and between-person effects of a given Level 1 variable and uses the within-person portion of the variable on Level 1, and its person mean on Level 2 (Preacher et al.,

2010; Zhang, Zyphur, & Preacher, 2009). With regards to centering decisions, UMM requires person-mean centering of Level 1 variables and grand-mean centering of Level 2 variables to separate within- and between-person variance (Preacher et al., 2010). Apart from being a requirement for adopting the UMM approach, the aforementioned centering recommendations are also in line with best practices regarding the conduct of diary studies in general as well as more specifically for the purpose of testing cross-level interaction effects (Aguinis, Gottfredson, & Culpepper, 2013; Ohly et al., 2010). Thus, I centered all Level 1 predictor and control variables around their person mean and all Level 2 predictor and control variables around the grand mean.

I used the MLwiN 2.28 software (Rasbash, Steele, Browne, & Goldstein, 2009) to test Hypothesis 1 and followed a step-by-step procedure outlined by Hox (2010). I also provided Snijders & Boskers Pseudo R-squared (2012) values that signify the amount of incremental within-and between-person variance explained by tests of my hypotheses. To test whether the cross-level interaction between weekly perceptions of leader emotional inconsistency (LEI) and high employee epistemic motivation positively relates to employee weekly creative process engagement (i.e., Hypothesis 1) I fitted a two-level model in which LEI, employee creative process engagement as well as control variables leader happiness, leader anger, and perceived time pressure were operationalised at Level 1 (i.e., the week-level), whereas employee epistemic motivation as well as control variables positive and negative affectivity, general creative process engagement, and company membership were operationalised at Level 2 (i.e., the person-level). More specifically, I started with a null model that merely included the intercept as the only predictor variable. The sole purpose of this model was to provide a basis for model fit comparisons as I already established under section 8.3.4 that all Level 1 variables investigated in this study exhibit both within- and between-person variance, thus justifying my multilevel approach to data analysis (Snijders & Bosker,

2012). In Model 1, I subsequently entered all focal and control variables listed above on both Levels 1 and 2 to examine whether my focal predictor is associated with the outcome over and above the variance already explained by the controls. Hypothesis 1 was tested in Model 2, in which I additionally entered the cross-level interaction between weekly leader emotional inconsistency and employee epistemic motivation.

Hypothesis 2 implies a multilevel moderated mediation model by proposing that employee weekly creative process engagement mediates the cross-level interaction effect between weekly LEI and high employee epistemic motivation on employee weekly creative performance. Until recently, the preferred approach to test moderated mediation hypotheses was informed by recommendations made by Baron and Kenny (1986), who proposed a piecemeal approach involving two models to separately test interaction effects on the mediator (i.e., the *a-path*) as well as the outcome variable (i.e., the *b-path*), whilst controlling for the effect of the independent variable. Moderated mediation is subsequently inferred in a second step where a Sobel test is used to assess the significance of the product term between the a- and b-paths (Preacher et al., 2007). This approach was subject to substantial criticism over the last decades for several reasons. First, due to the proposed piecemeal approach, Baron and Kenny's recommendations did not take into account the potential covariance between paths a and b, potentially introducing bias in the estimation of moderated mediation effects (Edwards & Lambert, 2007; Shrout & Bolger, 2002). Second, a successful test of moderated mediation according to the original recommendations necessitates a significant direct relationship between the independent and the dependent variable (Baron & Kenny, 1986). This requirement received heavy criticism as this entails a default test of partial mediation when usually full mediation is hypothesised (i.e., the hypothesis test does not accurately reflect what was originally hypothesised; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002). Finally, past

research showed that the Sobel test used to examine the significance of a moderated mediation effect is subject to estimation error and can thus lead to erroneous conclusions (Shrout & Bolger, 2002). Instead, whether or not a moderated mediation effect is significant can be more accurately tested by constructing confidence intervals around the product term of the a- and b-paths using either bootstrapping or the Monte Carlo method (Preacher et al., 2007; Preacher, 2015). For multilevel models, the Monte Carlo method arrives at more accurate estimates of moderated mediation effects by creating a sampling distribution of the product term of the a- and b-paths (Preacher & Selig, 2012). In order to test moderated mediation, confidence intervals are constructed around the moderated mediation effect by drawing a large number of resamples from the sampling distribution of the product term (see Koopman, Lanaj, & Scott, 2016 for a similar approach).

Addressing the aforementioned methodological concerns, I used Mplus Version 7 (Muthén & Muthén, 1998-2012) and its multilevel path modeling capabilities to test Hypothesis 2. This allowed me not only to follow the UMM approach advocated by Preacher and colleagues (2010) but also to take into account potential covariance between the a- and b-paths of my proposed multilevel moderated mediation model (see recommendations by Bauer, Preacher, & Gil, 2006). Furthermore, multilevel path modeling enabled me to test a complete moderated mediation, which is in line with the theoretical predictions made for Hypothesis 2. Lastly, I used the Monte Carlo method to test the significance of my multilevel moderated mediation effect. Specifically, I constructed confidence intervals around the multilevel moderated mediation effect by simulating 20.000 replications from the sampling distribution of the product term of the a- and b-paths (Koopman et al., 2016; Preacher & Selig, 2012).

Practically, I build on the above recommendations by fitting a multilevel path model in which employee weekly creative process engagement mediates the

cross-level interactive effect between weekly LEI and employee epistemic motivation on manager-rated employee creative performance whilst accounting for control variables on Levels 1 and 2 (i.e., the control variables listed under section 8.3.2 as well as the person mean of LEI in line with the UMM approach; Preacher et al., 2010). Following the recommendations of Bauer et al. (2006) I added random effects for paths a and b as well as a covariance term to account for potential covariance between said random slopes. Moreover, I created a cross-level interaction term between weekly LEI and employee epistemic motivation on employee creative process engagement by adding employee epistemic motivation as a predictor of the random slope for the relationship between weekly LEI and weekly employee creative process engagement (i.e., the a-path). The magnitude of the moderated mediation effect was calculated using the formula proposed by Bauer et al. (2006) conditional on the coefficient for the cross-level moderator (i.e., at +/- 1 standard deviations). Finally, to test the significance of my multilevel moderated mediation effect (i.e., Hypothesis 2), I constructed confidence intervals around the moderated mediation effect via the Monte Carlo method with 20.000 replications using a computational tool by Selig and Preacher (2008).

8.4.2 Hypothesis Tests

Table 8.3 presents means, standard deviations, and intercorrelations amongst the study variables. Correlations amongst Level 1 variables represent group-mean centred relationships between the weekly variables at the within-individual level of analysis. Level 1 variables were averaged across the five weeks to provide estimates of between-individual relationships with Level 2 variables (see Koopman et al., 2016 for a similar approach). Due to the high intercorrelation between employee weekly fatigue and weekly time pressure ($r = .76$, $p < .01$), I chose to exclude this variable from all further analyses. As both weekly fatigue and time pressure were included based on the same underlying theoretical rationale

(i.e., to control for a situational undermining effect with regards to epistemic motivation; van Kleef et al., 2012), I am confident that I am still effectively controlling for this mechanism. Re-running the MCFA of the measurement model reported under section 8.3.4 showed that the exclusion of weekly perceptions of fatigue did not compromise the overall model fit. In fact, fit indices remained unchanged.

In addition to this, the correlation table reveals elevated correlation coefficients (i.e., r > .70; Bedeian, 2014) between several of my study variables that raise the question of whether multicollinearity could influence study results. I provided an elaborate discussion on the precautions taken to avoid an adverse effect of multicollinearity on my parameter estimates in section 8.5.3 on limitations and future research directions. In brief, I have compelling theoretical justifications for the magnitude and directionality of the correlation coefficients in question (e.g., the elevated correlations between positive and negative affectivity with creativity; Baas, De Dreu, & Nijstad, 2008). Furthermore, the centering strategy (i.e., group-mean centering Level 1 variables and grand-mean centering Level 2 variables) I employed with regards to study variables reduces concerns regarding multicollinearity (Hofmann & Gavin, 1998). Lastly, since elevated correlations mainly involved control variables, I performed my data analyses with and without control variables, which did not affect the pattern of my results. Lastly, recent simulation studies showed that multicollinearity does not bias fixed and random parameter estimates in multilevel modelling analyses (Yu, Jiang, & Land, 2015). In conclusion, I am confident that multicollinearity did not adversely affect my study findings.

TABLE 8.3
Means, Standard Deviations, and Intercorrelations among Study Variables[a]

Variable	M	SD	1	2	3	4	5	6	7
Level 1 predictors									
1. Leader emotional inconsistency	3.86	1.98	—						
2. Leader happiness	2.65	1.53	-.55**	—					
3. Leader anger	1.88	0.95	-.30**	-.29**	—				
4. Time pressure	3.81	1.10	-.28**	-.07	.38**	—			
5. Fatigue	2.77	0.79	-.33**	-.04	.44**	.76**	—		
6. Creative process engagement	3.61	1.01	.34**	.09	-.50**	-.65**	-.75**	—	
7. Creative performance	4.72	1.62	.27**	.11	-.34**	-.42**	-.47**	.63**	—
Level 2 predictors									
8. General creative process engagement	3.57	1.14	.24	.05	-.62**	-.55**	-.63**	.74**	.63**
9. General creative performance	4.75	1.74	.32*	-.07	-.45**	-.50**	-.57**	.63**	.66**
10. Epistemic motivation	3.17	0.92	.60**	-.42**	-.54**	-.52**	-.68**	.80**	.73**
11. Positive affectivity	3.62	0.99	.06	.22	-.52**	-.42**	-.50**	.58**	.50**
12. Negative affectivity	1.85	0.92	-.10	-.12	.48**	.38*	.48**	-.58**	-.46**
13. Organisation[b]	0.58	0.50	.40**	-.37**	-.03	.32*	.15	.04	.29*

TABLE 8.3 (continued)

Variable	M	SD	8	9	10	11	12	13
Level 2 predictors								
8. General creative process engagement	3.57	1.14	—					
9. General creative performance	4.75	1.74	.68**	—				
10. Epistemic motivation	3.17	0.92	.67**	.71**	—			
11. Positive affectivity	3.62	0.99	.88**	.71**	.62**	—		
12. Negative affectivity	1.85	0.92	-.82**	-.72**	-.63**	-.88**	—	
13. Organisation[b]	0.58	0.50	-.11	-.05	.00	-.21	.19	—

Note. [a]Level 1, N = 253; level 2, N = 60. Correlations for the level 1 variables represent group-mean centred relationships among the weekly variables at the within-individual level of analysis. Level 1 variables were aggregated to provide correlations with level 2 variables

[b]1= insurance company, 0 = care company

* $p < .05$ level (two-tailed).

** $p < .01$ level (two-tailed).

8.4.2.1 Cross-Level Interaction Between Weekly LEI and Epistemic Motivation

Table 8.4 presents the results of my multilevel regression analysis to test Hypothesis 1, which proposed that the cross-level interaction between weekly LEI (Level 1) and high employee epistemic motivation (Level 2) positively relates to employee weekly creative process engagement (Level 1). The table also includes Snijders & Bosker's Pseudo R-squared (2012) to assess the variance explained across levels of analysis.

Before I tested Hypothesis 1, I included control variables as well as my focal predictors weekly LEI and epistemic motivation in Model 1. Four of the eight

control variables were significant; more specifically, weekly perceptions of leader anger and time pressure as well as general CPE and the person-level aggregate of leader emotional inconsistency were related to weekly CPE. Furthermore, both the focal variable weekly LEI ($\gamma = 0.089$, $SE = .039$, $t = 2.28$; $p < .05$) and the moderator epistemic motivation ($\gamma = 0.39$, $SE = .13$, $t = 3.07$; $p < .01$) were positively related to weekly CPE. Compared to the null model, Model 1 explained 70% within-person as well as 79% between-person variance in CPE.

To test Hypothesis 1, I added the cross-level interaction between weekly LEI and employee epistemic motivation to Model 2. The interaction term proved to be statistically significant ($\gamma = 0.123$, $SE = .028$, $t = 4.39$; $p < .001$). To examine the cross-level interaction in more detail, I performed simple slope tests (Preacher, Curran, & Bauer, 2006). Test results revealed that there was a positive relationship between weekly LEI and weekly CPE for employees with *high* (+1 *SD* above the mean; $\gamma = 0.213$, $SE = .045$, $t = 4.71$; $p < .001$), but not low (-1 *SD* below the mean; $\gamma = -0.013$, $SE = .045$, $t = -0.29$; *ns*) levels of epistemic motivation. In line with my prediction, Figure 8.2 depicts the positive relationship between weekly LEI and weekly CPE for employees with *high* epistemic motivation, whereas weekly LEI was unrelated to weekly CPE for those who had a *low* level of epistemic motivation. The inclusion of the cross-level interaction effect explained an additional 5% of incremental within-person variance in CPE. In sum, these findings provide support for Hypothesis 1, thus implying that employees with high levels of epistemic motivation benefit more from weekly LEI with regards to their weekly CPE compared to their low epistemic motivation counterparts.

TABLE 8.4
Results of Multilevel Regression Analyses of Creative Process Engagement

Variable	Model 1			Model 2		
	γ	SE	t	γ	SE	t
Level 2 predictors						
General creative process engagement	0.583	0.123	4.73***	0.581	0.123	4.72***
Mean leader emotional inconsistency	0.121	0.052	2.32*	0.121	0.052	2.32*
Epistemic motivation	0.399	0.130	3.06**	0.400	0.130	3.07**
Positive affectivity	-0.254	0.168	-1.51	-0.252	0.168	-1.50
Negative affectivity	-0.013	0.144	-0.09	-0.011	0.144	-0.07
Organisation[a]	-0.045	0.141	-0.31	-0.046	0.141	-0.32
Level 1 predictors						
Leader emotional inconsistency	0.089	0.039	2.28*	0.095	0.037	2.56*
Leader happiness	0.048	0.044	1.09	0.057	0.042	1.35
Leader anger	-0.159	0.046	-3.45***	-0.173	0.044	-3.93***
Time pressure	-0.349	0.039	-8.94***	-0.318	0.038	-8.36***
Cross-level interaction						
Leader emotional inconsistency X Epistemic motivation				0.123	0.028	4.39***
Pseudo-R within		0.69			0.04	
Pseudo-R between		0.78			0.00	
Between person (L2) variance	0.145	0.040		0.152	0.040	
Within person (L1) variance	0.292	0.030		0.265	0.027	

Note. [a] 1= insurance company, 0 = care company

Model 1 was compared with a null model with the intercept as the only predictor ($\gamma = 3.614$; SE = 0.129; t = 28.01; Level 1 variance = 0.591; SE = 0.06; Level 2 variance = 0.847; SE = 0.182).

*$p < .05$. **$p < .01$. ***$p < .001$.

FIGURE 8.2
Moderating Effect of Epistemic Motivation on the Relationship between Weekly Leader Emotional Inconsistency and Weekly Creative Process Engagement
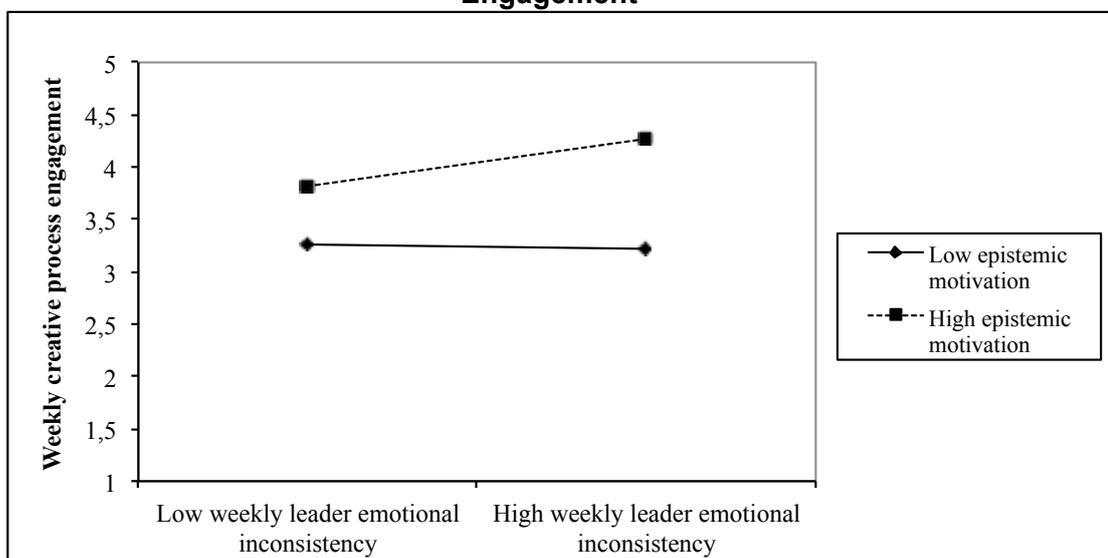
8.4.2.2 The Moderated Mediating Role of Epistemic Motivation

Table 8.5 summarises the results of my multilevel path analysis to test Hypothesis 2, which proposed weekly CPE (Level 1) to mediate the cross-level interactive effect between weekly LEI (Level 1) and epistemic motivation (Level 2) on manager-rated weekly CP (Level 1). I also provided Snijders and Bosker's Pseudo R-squared (2012) to assess the variance explained of the final moderated mediation model compared to a null model that solely included the intercept of weekly CP.

Results of multilevel path analyses showed a significant moderated mediation effect of epistemic motivation on the relationship between weekly LEIS and weekly CP via weekly CPE ($γ = 0.206$, $SE = .05$, $t = 4.15$; $p < .001$). Simple slope tests revealed a positive relationship between weekly LEI and weekly CP via weekly CPE for employees with *high* (+1 *SD* above the mean; $γ = 0.425$, $SE = .11$, $t = 3.78$; $p < .001$), but not low (-1 *SD* below the mean; $γ = 0.02$, $SE = .08$, $t = 0.24$; *ns*) levels of epistemic motivation. As previously mentioned, I constructed 95% confidence intervals (CI) around the moderated mediation effect using the Monte Carlo method (Koopman et al., 2016; Selig & Preacher, 2008). Moderated mediation is supported when the CI for the difference in the conditional indirect effects excludes zero (Preacher et al., 2007). Results derived from 20.000 Monte Carlo replications showed that multilevel moderated mediation was supported for high epistemic motivation employees as the 95% CI for this effect excluded zero (95% CI Low = 0.170; CI High =0.607). For employees with low levels of epistemic motivation, however, moderated mediation was not supported as the 95% CI included zero (95% CI Low = -0.195; CI High = 0.111). Compared to the null model, the moderated mediation model explained 55% of both within-and between person variance in weekly CP. Taken together, Hypothesis 2 was supported indicating that

individuals with high (but not low) levels of epistemic motivation benefit from weekly

LEI with regards to their weekly CPE as well as subsequent weekly CP.

TABLE 8.5
Results of Multilevel Path Analyses of Creative Performance - Moderated Mediation

Variable	Creative process engagement on creative performance			Creative performance		
	γ	SE	t	γ	SE	t
Level 2 predictors						
General creative performance				0.293	0.092	3.17**
Mean leader emotional inconsistency	0.175	0.059	2.98**			
Mean creative process engagement				0.907	0.161	5.62***
Epistemic motivation	0.446	0.150	2.98**	0.239	0.198	1.21
Positive affectivity	0.221	0.163	1.36	0.226	0.216	1.05
Negative affectivity	-0.103	0.168	-0.61	0.435	0.227	1.91
Organisation[a]	-0.071	0.166	-0.43	0.829	0.201	4.11***
Level 1 predictors						
Leader emotional inconsistency	-0.499	0.161	-3.11**			
Leader happiness	0.072	0.033	2.21*	0.083	0.068	1.21
Leader anger	-0.199	0.035	-5.73***	-0.048	0.081	-0.59
Creative process engagement				1.070	0.178	6.03***
Time pressure	-0.230	0.034	-6.84***	0.069	0.092	0.75
Cross-level interaction						
Leader emotional inconsistency X Epistemic motivation	0.206	0.050	4.15***			
Indirect relationships						
X*W➜M➜Y (+1SD)				0.425	0.113	3.78***
X*W➜M➜Y (-1SD)				0.020	0.084	0.24
Pseudo-R within					0.55	
Pseudo-R between					0.55	
Between person (L2) variance				0.334	0.100	
Within person (L1) variance				0.833	0.096	

Note. [a] 1= insurance company, 0 = care company.

Model 1 was compared with a null model with the intercept as the only predictor (γ = 4.724; SE = 0.206;

t = 22.88;Level 1 variance = 1.873;SE = 0.191; Level 2 variance = 2.091; SE = 0.469).
*p < .05. **p < .01. ***p < .001.

8.5 DISCUSSION

This study had two main aims. First, I set out to provide further evidence of

the construct- as well as criterion-related validity of the leader emotional

inconsistency scale (LEIS; a summary of the development and initial validation can

be found in Chapter 7). Second, I sought to establish external validity for the research model of this thesis.

Drawing on a longitudinal field sample from two different organisations, I conducted a series of MCFAs, which confirmed the multilevel factor structure of the LEIS. More specifically, I was able to show that a two-level model including both general and weekly versions of the LEIS (the latter having been adapted to reflect a weekly time frame) yielded adequate fit to the data. I adhered to best practices in my approach to scale validation as I used an independent sample with other-rated outcome variables to confirm the multilevel factor structure of the LEIS (DeVellis, 2012; Hinkin, 1998). What is more, by measuring leader emotional inconsistency at the weekly level I ensured an appropriate alignment between theory and levels of measurement, which has been neglected in past leadership research (Gooty et al., 2012). This is particularly important due to the adverse effect of recall bias on follower ratings pertaining to leader behaviour in general (Hansbrough et al., 2015) as well as inconsistent emotions in particular (e.g., Fong, 2006). Therefore, my weekly approach increases the accuracy of follower ratings of leader emotional inconsistency and thus provides greater confidence in the reliability and validity of my study results (Bolger et al., 2003).

In addition, I was able to establish both the criterion-related validity of the LEIS as well as the external validity of my research model by showing that weekly leader displays of emotional inconsistency between happiness and anger were positively related to the creative performance followers exhibited during the week. I further showed that the effect of weekly leader emotional inconsistency is explained by an increase in weekly creative process engagement, however, only in case followers were able to decode the social information conveyed by emotionally inconsistent displays (i.e., in case of high epistemic motivation). For those followers with low levels of epistemic motivation there was no relationship between weekly

leader emotional inconsistency and weekly creative performance via weekly creative process engagement.

These findings are fully in line with my theoretical predictions based on EASI theory (van Kleef, de Dreu, & Manstead, 2009). According to EASI, depending on the information processing capabilities of followers (i.e., their level of epistemic motivation) leader emotional expressions exert social influence that can either evoke cognitive or affective reactions in followers and ultimately change their behaviour (van Kleef et al., 2012). In line with this argumentation, I hypothesised and found that weekly leader displays of emotional inconsistency between happiness and anger spark the creative performance of their followers by increasing their involvement in "creativity-relevant cognitive processes" (i.e., creative process engagement; Zhang & Bartol, 2010a, p.112). Importantly and in line with EASI theory, I only found this effect in case followers had high levels of epistemic motivation, which predisposes them to experience cognitive reactions (e.g., creative process engagement) when observing leader emotional expressions.

Taken together, my findings provide valuable insights into the role of emotional expressions for creative leadership (i.e., the process of leading others towards the attainment of a creative outcome; Mainemelis, Kark, & Epitropaki, 2015). In particular, this study indicates the need for organisations to consider the fit between emotionally expressive leaders and the predispositions of their followers when attempting to increase their creative performance. Accordingly, my findings showed that if leaders engage in alternating displays between happiness and anger during a working week, only those followers will benefit in terms of their creative output that can make sense of and infer meaning from said inconsistent emotional expressions (i.e., followers with high levels of epistemic motivation).

8.5.1 Theoretical Implications

The findings of this study advance theory on leader emotional influence at work in several ways. To begin with, most prior research on the impact of emotional expressions has been conducted in a laboratory setting (van Kleef et al., 2012). Thus, I provide some of the first evidence of leader influence through emotional expressions in a more naturalistic field setting and by doing so answer a call by van Kleef and colleagues (2012). The availability of empirical evidence derived from the present field study in addition to existing evidence from the experimental studies reported in Chapters 5 and 6 allows for greater confidence in the conclusions of this thesis (e.g., via the triangulation of results across research settings; Saunders, Lewis, & Thornhill, 2009).

Second, I provide a first account of the potential usefulness of leader emotional inconsistency between happiness and anger in a cooperative, leader-follower relationship using the example of follower creative performance as a typical outcome of effective emotional leadership (Mainemelis et al., 2015). Past research on leader emotional inconsistency or similar constructs such as emotional ambivalence solely examined its application in more competitive contexts such as negotiations (Rothman, 2011; Sinaceur et al., 2013). I thus contribute to the emotions and leadership literatures by showcasing that displaying complex nonverbal communication can indeed lead to positive work-related outcomes in a cooperative leader-follower relationship (Rothman & Melwani, in press).

Thirdly, I make clear that the effectiveness of leader emotional inconsistency in sparking creative performance only holds when followers are appropriately predisposed and can thus infer meaning from inconsistently displayed happiness and anger (i.e., in case of high epistemic motivation). The identification of epistemic motivation as a boundary condition of the examined relationships extends the applicability of one of the core predictions of EASI theory

beyond the simplistic conceptualisation of consistent emotional expressions (e.g., consistent happiness) to further include inconsistent expressions involving two distinct discrete emotions (e.g., happiness and anger). According to EASI, follower levels of epistemic motivation determine the relative precedence of cognitive or affective reactions that ensue when observing emotional expressions, with high (low) epistemic motivation leading to cognitive (affective) reactions (van Kleef, de Dreu, et al., 2009). By showing that weekly leader emotional inconsistency increases weekly follower creative performance via weekly creative process engagement exclusively for followers with high levels of epistemic motivation I confirm a central tenet of EASI theory and apply it to the study of inconsistent emotional expressions.

Fourthly and related to the preceding point, follower weekly creative process engagement is identified as the key cognitive process through which weekly leader emotional inconsistency relates to increases in weekly creative performance, which empirically supports the theoretical claims made by EASI theory that for high epistemic motivation followers leader emotional influence on performance outcomes is explained by their cognitive reactions to emotional leadership (van Kleef et al., 2012).

I base all of my predictions on one comprehensive theoretical framework, namely EASI theory (van Kleef et al., 2012; van Kleef, 2009). In the past, the processes underlying social influence via emotional expressions has been explained using a range of different theories that, in isolation, appear to explain a theoretical scope that is too narrow to fully capture the impact emotional inconsistency has in leader-follower relationships. As described in Chapter 2 of this thesis, theoretical frameworks used in past research include theories that exclusively emphasise affective (e.g., emotional contagion; Hatfield et al., 1993; Sy, Côté, & Saavedra, 2005) or cognitive processes (e.g., situational appraisals; Lazarus, 1991; Smith, Haynes, Lazarus, & Pope, 1993) when explaining the impact

of interpersonal emotional expressions on observers. EASI theory combines both affective and cognitive approaches to explain emotional influence and introduces a relative precedence between both perspectives contingent on the respective observer's information processing capabilities (i.e., epistemic motivation). I applied EASI theory's contingency on epistemic motivation in explaining cognitive and affective reactions to emotional expressions to allow for the investigation of inconsistent emotional expressions. Accordingly and in line with EASI theory, I argued in section 8.2 that for observers with high epistemic motivation, leader emotional inconsistency between two discrete emotions will lead to cognitive reactions determined by the social information conveyed by the two discrete emotions that constitute the expression of emotional inconsistency. Conversely, for observers with low epistemic motivation I proposed an additive affect between the two emotional component parts of emotional inconsistency conditional on the valence of the respective discrete emotions.

Thus, I believe that EASI theory provides a suitable theoretical platform to the end of exploring the work-related consequences of displaying both consistent (e.g., happiness) as well as more complex patterns of emotional influence such as emotional inconsistency (e.g., alternations between happiness and anger). Future studies could further extend the theoretical and empirical basis of the present field study. For example, it would be interesting to explore whether different types of leader emotional inconsistency (e.g., between anger and disappointment; Sinaceur et al., 2013) would equally spark the creative performance of followers. Following from this, researchers could look at various combinations between two discrete emotions using the theoretical framework of this study and examine whether or not the effects of emotional inconsistency on creative performance hold for a variety of discrete emotion combinations. As the field investigation of another type of emotional inconsistency (e.g., between anger and disappointment) would necessitate the construction of another measurement scale, the approach to scale

development and validation described in Chapter 7 as well as the present chapter could act as a blueprint for such future research endeavors.

8.5.2 Practical Implications

Organisations in general and managers in particular can draw from these study results if they want to increase the creative performance of their staff. This can be achieved by training managers in appropriate nonverbal and emotional influencing tactics as well as by selecting employees that are receptive to and inspired by emotionally inconsistent leadership. For example, organisations could include emotional and nonverbal communication trainings into existing leadership development programmes (for an example of how to successfully train emotional competencies see Kotsou, Nelis, Grégoire, & Mikolajczak, 2011). Such training programmes could include both a behavioural instruction on how to successfully exert social influence to the end of increasing follower creative performance (e.g., by means of displaying emotional inconsistency between happiness and anger) as well as a module aiming at developing the awareness of participants regarding who is likely to benefit from such emotional leadership (i.e., followers that can infer meaning from emotionally inconsistent communication).

The findings of this study could further inform organisational policies around recruitment and selection. Organisations interested in a creative workforce could change their recruitment policies and focus on selecting applicants that bring with themselves a predisposition to be receptive to emotionally inconsistent leadership (i.e., applicants with high levels of epistemic motivation). One way to implement this is to introduce psychometric testing of applicants and in particular to focus on those traits in regard to selection decision that are indicative of high epistemic motivation. This could be achieved by assessing applicant personality traits such as openness to experience, need for cognitive closure, or personal need for structure (Van Kleef et al., 2011). High scores on openness to experience scales,

as well as low scores on need for cognitive closure or personal need for structure scales would be indicative of high epistemic motivation (Van Kleef et al., 2011), which could in turn inform hiring decisions of organisations. Ultimately, an alignment between organisational recruitment and selection policies with the previously suggested leadership development efforts could create an optimal leader-follower fit to the end of increasing the creative output of employees in particular and of the organisation in general.

On a more general level, informed by the findings of the current study organisations could change their company culture to reflect a vision that emphasises the pursuit of creative endeavors. This cultural strategy could, for example, be reflected in a mission statement that delineates company values and related norms prescribing desired behaviours involving emotional expressivity in leadership, as well as curiosity and openness to experiences on the side of the employees (Schein, 2006). Such a company culture could facilitate leader-follower interactions intended to spark creative performance since it reduces concerns on the side of both leaders and followers as to what kind of emotional leadership can be considered as culturally appropriate (van Kleef et al., 2012).

8.5.3 Limitations and Directions for Future Research

Despite my study's many strengths (e.g., regarding the theoretical contribution made as well as my methodological approach), there are some limitations that should be acknowledged.

One of these limitations is that I did not explicitly assess the inferences followers make when observing leader emotional inconsistency between happiness and anger. Whilst I postulated that followers infer from happy (angry) leader displays feedback pertaining to good (bad) performance leading to a cognitive reaction and subsequent behaviour change (e.g., van Kleef, Homan, et al., 2009), I did not explicitly measure whether these performance inferences are actually made

by followers. What is more, this implicit assumption that certain performance inferences are made in reaction to leader emotional expressions seems to be a topic that so far has not received empirical scrutiny within the study of social influence based on the EASI model. Therefore, it is all the more important that future studies examining the impact of leader emotional influence on follower work-related outcomes prioritise the critical examination of this key assumption of EASI theory.

Methodologically, upon closer examination of my correlation table I registered elevated correlation coefficients (i.e., $r > .70$; Bedeian, 2014) between Level 2 variables (e.g. control variables as well as epistemic motivation) and Level 1 variables (e.g., CPE and CP) that may raise the question of whether multicollinearity could have adversely affected study results. Despite recent research showing that multicollinearity does not bias fixed and random parameter estimates in multilevel modelling analyses (Yu et al., 2015), I took several precautions to rule out the possibility of multicollinearity altogether. From a theoretical perspective, I would expect a high correlation between both positive as well as negative affect and creativity (Baas et al., 2008), which provides justification towards the reported association between positive and negative affectivity with general creative process engagement (CPE) as well as general creative performance (CP). Similarly, there is a theoretical basis to expect a correlation between epistemic motivation and creativity (Feist, 1998; Gocłowska et al., 2014; van Kleef et al., 2012), an association I observe in my dataset regarding weekly creative process engagement and weekly creative performance. The existence of a theoretical rationale for the magnitude and directionality of my correlations should therefore lower the possibility that multicollinearity represents an issue in my dataset (Yu et al., 2015). Second, I centered all study variables, which both facilitates the interpretation of results and alleviates concerns regarding multicollinearity (Bell & Jones, 2015; Hofmann & Gavin, 1998). Lastly, since

elevated correlation coefficients and thus potential collinearity issues mainly involved control variables (e.g., positive and negative affectivity, general CPE and CP) I performed my data analyses with and without control variables to see whether this would affect the pattern of my results. However, the exclusion of control variables did not affect the directionality or significance levels of my results. In sum, I concluded that multicollinearity did not adversely affect my study findings.

Another methodological limitation concerns the cross-sectional nature of my week-level data. Whilst I was able to investigate the effect of weekly changes of my study variables, within the respective week my study design remains cross-sectional in nature (e.g., because my diary design solely involves one measurement occasion per week; Bolger & Laurenceau, 2013). Future studies could undertake a more fine-grained examination of whether the proposed interrelationships between weekly study variables also hold when utilising three or more measurement occasions within a week. For example, it would be interesting to investigate the influence of leader emotional inconsistency at the beginning of the week on follower creative process engagement mid week, and creative performance at the end of a week (see Bono, Glomb, Shen, Kim, & Koch, 2013 for an example of within-day and Ouweneel, Le Blanc, Schaufeli, & van Wijhe, 2012 for an example of cross-day diary studies).

Lastly, throughout my multilevel analyses, I minimised the risk of common source and common method biases (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff, MacKenzie, & Podsakoff, 2012) by obtaining weekly manager-ratings of follower creative performance. Still, all remaining variables, including follower weekly creative process engagement, were assessed using self-report measures. Whilst previous research highlighted the fact that it is sensible to use self-report measures for the investigation of within-person relationships involving creative behaviour (Ng & Feldman, 2012), future studies could employ other-ratings (e.g., peer ratings) of creative process engagement in an attempt to

replicate my findings. Independently of this, the fact that I was able to find a cross-level interaction effect further alleviates concerns regarding common method variance (CMV) since the existence of CMV tends to suppress the detection of cross-level interactions rather than to promote it (Lai, Li, & Leung, 2013).

8.5.4 Conclusion

My study demonstrates that weekly leader displays of emotional inconsistency between happiness and anger spark follower weekly creative performance by triggering creativity-relevant cognitive processes, but only in case followers were able to make sense of their leader's nonverbal communication. Not only do my study findings provide external validity to the research model put forward by this thesis, but they also present further evidence towards the construct- and criterion-related validity of the LEIS, a measurement scale that has specifically been developed for this study. Generally, organisations have to be aware that creative performance is the result of appropriate leadership in combination with a workforce that is receptive to and is in fact inspired by the leadership they observe.

CHAPTER 9:

DISCUSSION AND INTEGRATION OF RESEARCH FINDINGS

"I don´t mind causing offence when I intend to,

but I don´t like causing it accidentally"

Stewart Lee

9.1 CHAPTER SUMMARY

This final chapter discusses and integrates the findings of all studies on the effects of deliberate leader emotional influence on follower creative performance that have been reported as part of this thesis. The chapter opens with a general summary of all study results, followed by a discussion of theoretical and practical implications that follow from those results. After considering the strengths and limitations of the studies that have been conducted, I present potential avenues for future research that follow from this thesis. The thesis ends with a final conclusion.

9.2 SUMMARY OF STUDY FINDINGS

Guided by a review of the literatures on leadership and affect as well as of creative performance, the aim of this thesis was to investigate how and under which conditions leader emotional inconsistency between happiness and anger relates to follower creative performance. Based on EASI theory (van Kleef et al., 2012; van Kleef, 2009), I developed a research model linking leader emotional inconsistency to follower creative performance via follower creative process engagement. In addition, I took into account follower levels of epistemic motivation as a boundary condition of this relationship.

I found support for my hypotheses by conducting an experimental study in which a leader-follower interaction was simulated using a video manipulation of leader emotional inconsistency. Compared to both consistent leader happiness and anger, moderated mediation analyses showed that leader emotional inconsistency

was positively related to follower creative performance via increases in follower creative process engagement, but only under certain conditions. More specifically, leader displays of emotional inconsistency only sparked follower creative performance when they were able to decode the social information conveyed by inconsistently displayed happiness and anger (i.e., in case of high epistemic motivation). Conversely, in case followers were unable to make sense of their leader's displays of emotional inconsistency (i.e., low epistemic motivation followers), their levels of creative process engagement and subsequent creative performance remained unchanged. These results are in line with propositions of EASI theory (van Kleef et al., 2012) and indicate that follower cognitive reactions to leader emotional expressions (e.g., higher creative process engagement) are more likely in case followers are able to thoroughly process social information that is conveyed by emotional expressions (i.e., in case of high levels of epistemic motivation).

I was able to partially replicate these findings by conducting a second experimental study. In contrast to the first experiment, in this study a leader-follower interaction was simulated using a scenario-type manipulation of leader emotional inconsistency (Aguinis & Bradley, 2014). In detail, the key hypothesis of the proposed moderated mediation model was replicated, namely that leader emotional inconsistency would spark follower creative performance via increases in creative process engagement for followers with high levels of epistemic motivation. However, for low epistemic motivation followers, results were mixed and depended on the consistent emotional expression (e.g., leader happiness or leader anger) leader emotional inconsistency was compared with. More specifically, when compared to leader happiness, leader emotional inconsistency had a negative effect on follower creative performance through decreased creative process engagement. In contrast, when compared with leader anger, no significant

relationship between leader emotional inconsistency and follower creative performance via creative process engagement could be observed.

Finally, using data gathered from 60 manager – employee dyads drawn from two UK-based organisations I successfully replicated the research model of this thesis in a field setting utilising a weekly diary design (e.g., Bolger, Davis, & Rafaeli, 2003). Using a measurement scale of leader emotional inconsistency specifically developed for this study, multilevel moderated mediation analyses showed that weekly leader displays of emotional inconsistency between happiness and anger are indeed positively related to weekly manager-rated follower creative performance via increases in weekly creative process engagement for high epistemic motivation followers. Conversely, there was no significant multilevel moderated mediation effect for followers with low levels of epistemic motivation.

9.3 THEORETICAL IMPLICATIONS

This thesis makes significant theoretical contributions to advance several streams of research, whilst successfully addressing the theoretical gaps identified in Chapters 1 and 2.

First, I extend previous research and theorizing about how leader emotional displays impact follower work-related outcomes by incorporating theory related to inconsistent emotional expressions (i.e., the alternation between two distinct dicrete emotional expressions over the course of a single encounter; Sinaceur, Adam, Van Kleef, & Galinsky, 2013). By doing so I have highlighted that only considering consistently displayed emotions such as happiness or anger individually fails to fully capture the reality of leader-follower interactions. In this thesis, I showed that interpersonal emotional displays can fluctuate as part of the leadership process both between different discrete emotions as well as over time, which mirrors research findings pertaining to the transient and fluctuating nature of intrapersonal emotions (e.g., Beal, Weiss, Barros, & MacDermid, 2005).

Second, I build on EASI theory (van Kleef, de Dreu, et al., 2009) with studies that help explain how the display of inconsistent emotions affects observers in a cooperative leader-follower setting. Whilst past research on the impact of leader emotional displays on follower outcomes has focused on the effects of consistently displayed emotional expressions such as happiness (Visser et al., 2013) or anger (van Kleef, Homan, et al., 2009), here I highlight the potential contribution *inconsistent* emotional displays can make to leadership practice. Recent empirical evidence and theorising on emotional inconsistency suggested that displaying such emotional communication in a negotiation context results in a zero-sum game whereby the expresser succeeds in obtaining a concession from the observer (Sinaceur et al., 2013). I complement and extend previous research by showing the potential positive effects of leader emotional inconsistency on follower performance outcomes, which ultimately benefit both the expresser and the observer.

Third, I provide evidence of a contingency model concerning the effects of leader emotional inconsistency. I report empirical evidence that makes clear that the effectiveness of leader emotional inconsistency in sparking creativity-relevant cognitive processes (i.e., creative process engagement; Zhang & Bartol, 2010a) only holds when followers are appropriately predisposed and can thus infer meaning from inconsistently displayed happiness and anger. In all studies conducted as part of this thesis, I identify epistemic motivation as a boundary condition of the examined interrelationships. Specifically, I demonstrated that leader emotional inconsistency is associated with increased creative process engagement, however, only for followers with high levels of epistemic motivation (i.e., those who were able to decode the social information conveyed by inconsistent emotions). Conversely, for followers with low levels of epistemic motivation (i.e., those who are less able to decode said social information) I found that leader emotional inconsistency is either unrelated to follower creative process

engagement (e.g., in the experiment reported in Chapter 5 and the field study summarised in Chapter 8) or has a negative effect on follower creative process engagement (e.g., in the experiment reported in Chapter 6 but only when leader emotional inconsistency was compared with consistent leader happiness). The identification of epistemic motivation as a boundary condition of the examined relationships extends the applicability of one of the core predictions of EASI theory beyond an account of consistent emotional expressions (e.g., consistent happiness) to further include inconsistent expressions involving two distinct discrete emotions (e.g., happiness and anger). According to EASI, follower levels of epistemic motivation determine the relative precedence of cognitive or affective reactions that ensue when observing emotional expressions, with high (low) epistemic motivation leading to cognitive (affective) reactions (van Kleef, de Dreu, et al., 2009). By showing that leader emotional inconsistency increases creative process engagement exclusively for followers with high levels of epistemic motivation I confirm a central tenet of EASI theory and apply it to the study of inconsistent emotional expressions.

Fourth, I advance a theoretical account to explain the effects of leader emotional inconsistency on follower creative performance. Based on EASI theory (van Kleef, 2009) I identified a cognitive mechanism that links leader emotional inconsistency to creative performance for followers with high levels of epistemic motivation, namely creative process engagement. Throughout the studies reported within this thesis, I consistently show that creative process engagement acts as an underlying mechanism that explains the effects of leader emotional inconsistency on follower creative performance. Therefore, I make a contribution to the literature on creative performance and show that complex nonverbal communication by leaders can affect both follower cognitive engagement in the creative process as well as subsequent creative performance. Creative process engagement has previously also been investigated as a predictor of relevant work-related outcomes

other than creative performance, for example in-role performance (X. Zhang & Bartol, 2010b). This research therefore provides a theoretical basis for the current investigation but could similarly act as a framework for future research on the repercussions of leader emotional inconsistency in leader-follower relationships.

Importantly, I base all of my predictions on one comprehensive theoretical framework, namely EASI theory (van Kleef et al., 2012; van Kleef, 2009). EASI theory combines both affective (e.g., emotional contagion; Hatfield et al., 1993; Sy, Côté, & Saavedra, 2005) and cognitive approaches (e.g., situational appraisals; Lazarus, 1991; Smith, Haynes, Lazarus, & Pope, 1993) that have been used in the past to explain topics surrounding emotional influence and introduces a relative precedence between both perspectives contingent on the respective observer's information processing capabilities (i.e., epistemic motivation). I build on EASI theory's contingency on epistemic motivation in explaining cognitive and affective reactions to emotional expressions to allow for the investigation of inconsistent emotional expressions. The theoretical model advanced by this thesis complements EASI theory and proposes that for observers with high epistemic motivation, leader emotional inconsistency between two discrete emotions will lead to cognitive reactions determined by the social information conveyed by the two discrete emotions that constitute the inconsistent emotional expression. Conversely, for observers with low epistemic motivation I propose an additive affect between the two emotional component parts of emotional inconsistency conditional on the valence of the respective discrete emotions. For a more fine-grained discussion of this theoretical extension I refer to Chapter 5.

Overall, the successful replication of hypothesised interrelationships between study variables across two experimental studies, as well as a weekly field study provides empirical evidence supporting the key predictions advanced in this thesis. The constructive replication efforts that formed part of this thesis have been described as a "scientific gold standard"(Jasny, Chin, Chong, & Vignieri, 2011,

p.1225) because they strengthen "confidence in the validity of the hypothesised relationships" (Eden, 2002, p.842). The triangulation of evidence from experimental and field research is particularly relevant when considering the current replication crisis regarding social psychological research (Maner, 2016; Stroebe, 2016). Following from this, the study findings discussed in this thesis provide internal as well as external validity to the research model advanced by this thesis (Saunders et al., 2009).

9.4 PRACTICAL IMPLICATIONS

In addition to the theoretical contributions discussed above, this thesis also provides practitioners with insights and addresses practical implications that have been anticipated in Chapter 1.

First, an implication for organizational practice that follows from this thesis is that managers can be trained to display effective emotional leadership tactics to spark employee creativity. Due to the fact that the studies reported in this thesis showed that a particular type of leader behaviour (i.e., leader displays of inconsistency between happiness and anger) can spark follower creative performance, practitioners interested in increasing the creative potential of their workforce can add modules on training such concrete behaviours to their existing leadership development programmes (see Day, Fleenor, Atwater, Sturm, & McKee, 2014 for a recent review on leadership development). Specifically, I propose to train managers so that they can alter their own emotional leadership style to match their respective employees' preferences in terms of information processing capabilities. For example, for employees with reduced information processing capabilities (i.e. low epistemic motivation individuals) the consistent display of happiness may yield better results when attempting to increase their work performance (van Kleef, Homan, et al., 2009) or creativity (Visser et al., 2013). Conversely, I was able to show that leader displays of emotional inconsistency

between happiness and anger particularly spark creative performance in case followers are equipped with increased information processing capabilities (i.e., high epistemic motivation). HR professionals could develop leadership development trainings to support leaders in this process.

Second, in conjunction with implications for leadership training and development, the findings of this thesis could further inform organisational policies around recruitment and selection. Organisations interested in a creative workforce could change their recruitment policies and focus on selecting applicants that are predisposed to be receptive to emotionally inconsistent leadership (i.e., applicants with high levels of epistemic motivation). One way to implement this is to introduce psychometric testing of applicants and in particular to focus on those traits that are indicative of high epistemic motivation when making a hiring decision. This could be achieved by assessing applicant personality traits such as openness to experience, need for cognitive closure, or personal need for structure (Van Kleef et al., 2011). High scores on openness to experience scales, as well as low scores on need for cognitive closure or personal need for structure scales would be indicative of high epistemic motivation (Van Kleef et al., 2011), which could in turn inform hiring decisions of organisations. Ultimately, an alignment between organisational recruitment and selection policies with the previously suggested leadership development efforts could create an optimal leader-follower fit, with a view to increasing the creative output of employees as well as of the organisation in general.

Third, informed by the findings of this thesis, organisations could change their company culture to reflect a vision that emphasises the pursuit of creative endeavors. Such a cultural strategy could, for example, be reflected in a mission statement that delineates company values and related norms prescribing desired behaviours involving emotional expressivity in leadership, as well as curiosity and openness to experiences on the side of the employees (Schein, 2006). Such a

company culture could facilitate leader-follower interactions intended to spark creative performance since it reduces concerns on the side of both leaders and followers as to what kind of emotional leadership can be considered as culturally appropriate (van Kleef et al., 2012). Relatedly, due to the fact that epistemic motivation can also be undermined by environmental factors such as fatigue (van Kleef et al., 2012) managers and HR professionals can implement changes regarding the respective organization's work climate or culture to counteract this negative influence. For example, leaders could encourage employees to more autonomously take breaks (Trougakos, Hideg, Cheng, & Beal, 2014) and to mentally switch off work during off-job time (Sonnentag, Binnewies, & Mojza, 2010) to reduce employee fatigue.

Finally, apart from a more designed fit between leadership (e.g., due to targeted leadership development) and followership (e.g., as a result of particular recruitment and selection policies), a change in organisational culture and climate that focuses on building a creative workforce could also be communicated externally through public relations channels. In case a particular culture or work climate is communicated externally, potential applicants could make informed decisions on whether to join such organisations in the sense of attraction-selection-attrition processes (Schneider, 1987). This way, public relations channels could be used as a means of expectation management by organisations (Olkkonen & Luoma-aho, 2014) targeting potential future applicants to ensure that a creative workforce is attracted to apply for the respective job roles.

9.5 LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Despite the contribution of the findings reported in this thesis (e.g., regarding the theoretical contribution made as well as my methodological approach), there are some limitations that should be acknowledged.

First, whilst this thesis constitutes an extension of EASI theory, the reported studies did not strictly provide a complete test of all theoretical mechanisms that EASI proposes. As previously described, EASI theory purports that depending on follower levels of epistemic motivation (i.e., high vs. low), leader emotional expressions trigger predominantly cognitive or affective reactions, respectively (van Kleef, 2009). The present thesis built on this theoretical foundation whilst making several theoretical assumptions that have either been traditionally made in research using EASI theory or constitute logical extensions from past research findings on consistent leader emotional expressions and creative performance (i.e., research investigating the effects of consistent happiness or anger individually). Traditionally, when investigating cognitive or affective reactions studies conducted using EASI theory often did not explicitly assess whether followers actually make the proposed cognitive inferences (e.g., anger-related inferences regarding substandard performance) or experience emotional contagion when observing leader emotional expressions. For example, in a study investigating the effects of leader anger on follower creative performance van Kleef et al. (2010) implicitly inferred a proposed cognitive reaction by measuring whether task engagement levels increase for followers with high epistemic motivation (i.e., EASI theory's cognitive pathway). Similarly, whilst the researchers in this study hypothesised decreased follower task engagement for low epistemic motivation followers (i.e., EASI theory's affective pathway) they did not measure whether this was due to a negative contagion effect from observing leader anger (van Kleef et al., 2010). Generally, most studies using EASI as their framework only partially replicate the theory and instead use high vs. low levels of epistemic motivation as a proxy for cognitive or affective reactions. Building on this research tradition, I postulated in line with EASI theory (e.g., van Kleef, Homan, et al., 2009) that followers infer from happy (angry) leader displays feedback pertaining to good (bad) performance leading to a cognitive reaction and subsequent behaviour change. I did not

explicitly measure whether these performance inferences are actually made by followers. What is more, this implicit assumption that certain performance inferences are made in reaction to leader emotional expressions seems to be a topic that so far has not received empirical scrutiny within the study of social influence based on the EASI model. Therefore, it is all the more important that in the future researchers investigating the impact of leader emotional influence on follower work-related outcomes prioritise the critical examination of this key assumption of EASI theory. Another theoretical assumption made regarding the studies in this thesis relates to EASI theory's affective reactions pathway in case of inconsistent leader emotional expressions and constitutes a logical extension based on past research on leader emotions and creative performance (van Kleef et al., 2010; Visser et al., 2013). EASI theory postulates that low epistemic motivation followers will have affective reactions (e.g., emotional contagion) when observing leader emotional expressions that are of the same valence as the emotional expression observed (e.g., leader expressions of shame lead to negative emotional contagion in observers; van Kleef et al., 2012). Past research investigating creative performance showed that in the case of leader happiness (anger), low epistemic motivation followers experience positive (negative) emotional contagion (van Kleef et al., 2010; Visser et al., 2013). Logically extending past research findings on consistent emotional expressions, I theorised as part of this thesis that for low epistemic motivation followers the observation of inconsistent emotions of opposite valences (e.g., happiness and anger as operationalised in this thesis) would trigger sequential positive and negative emotional contagion effects that ultimately cancel each other out. In addition to this, I theorised but did not investigate in this thesis that the observation of inconsistent emotions of the same valence (e.g., anger and sadness) would lead to an additive emotional contagion effect (e.g., the individual negative contagion effects of anger and sadness add up to trigger a stronger negative contagion effect). In the future, it would be worthwhile for researchers to

explicitly examine whether the observation of inconsistent emotional expressions of opposite (same) valences actually lead to contagion effects that cancel each other out (add up).

Second, the findings of the replication study in Chapter 6 also raise a number of questions for future research. For example, results of the study reported in Chapter 5 provided unequivocal support for my research model whereas in the study reported in Chapter 6 I found partial support for some of the hypotheses. More specifically, whereas leader displays of emotional inconsistency were *unrelated* to both creative process engagement and creative performance for low epistemic motivation followers independently of what the comparison group was (i.e., leader happiness or leader anger) in Chapter 5, the results reported in Chapter 6 showed that this result could only be replicated for a comparison between leader anger and leader emotional inconsistency. In comparison with leader happiness, leader emotional inconsistency had a *negative effect* on follower creative performance via decreases in creative process engagement for low for epistemic motivation followers, which only partially confirmed my initial hypothesis. I believe that this difference in results between both studies is due to the scenario-type manipulation of leader emotional inconsistency employed in Chapter 6. More specifically, compared to the video manipulation employed in Chapter 5, the scenario manipulation featured less nonverbal cues and was thus less life-like (e.g., constant changes regarding both the leader's tone of voice and his body postures were missing), which could have slightly changed the emotion perception of study participants (Barrett et al., 2011). Recent research shows that the potential impact of emotion words (e.g., as employed in scenario manipulations of emotional expressions; Aguinis & Bradley, 2014) is dependent on the context in which they are communicated (Stam et al., 2016). It may be the case, that the relative lack of nonverbal cues inherent in the scenario manipulation (i.e., as compared to the video manipulation) increases observer feelings of unpredictability and uncertainty,

which have previously been discussed as possible consequences of emotionally inconsistent displays (Sinaceur et al., 2013). Therefore, the possibility that leader emotional inconsistency is perceived differently depending on the type of experimental manipulation employed (video vs. scenario), including possible mechanisms and boundary conditions of this effect, warrants validation.

Third, a further avenue for future research may be whether follower individual differences account for the aforementioned differences in leader emotion perception between different experimental manipulations of leader emotional inconsistency. Past research has shown that followers perceive leader emotional expressions differently depending on their personality makeup, for example, if they are particularly agreeable (Van Kleef et al., 2010). Extending this line of research, it may be worth investigating whether individual difference factors related to emotional reactivity such as neuroticism (Gross et al., 1998) or insecure attachment styles (Harms, 2011) exacerbate the negative effect of angry expressions that are part of leader emotional inconsistency. It is likely that the creative performance of individuals with a predisposition to negative emotional reactivity could decrease after having been exposed to leader emotional inconsistency (Baas et al., 2008; van Kleef et al., 2012).

Fourth, the intensity with which individual emotions are displayed may also impact how emotional inconsistency is perceived (van Kleef et al., 2012). Past research shows that especially the intensity of angry expressions can affect the extent of negative observer responses (Gibson & Callister, 2009). Thus, it might be useful to explore how various intensity levels of individually expressed emotions (e.g., happiness and anger) affect the general perception of emotional inconsistency between happiness and anger.

Fifth, a strength of the experimental research design and analytical approach described in Chapters 5 and 6 is that I was able to compare the effects of leader emotional inconsistency with leader happiness as well as leader anger

individually (see Sinaceur et al., 2013 for a study on emotional inconsistency where consistent happiness and anger was conflated as a control group). However, research designs of prior studies on consistent leader emotions (e.g., leader happiness and leader anger) and follower creativity also included leader neutral expressions as an additional control group (van Kleef et al., 2010; Visser et al., 2013). Thus, future research could attempt at replicating my results by examining the impact of leader emotional inconsistency between happiness and anger on follower creative performance compared to leader neutral expressions.

Apart from this, future studies could further extend the theoretical and empirical basis of this thesis by exploring whether different types of leader emotional inconsistency (e.g., between anger and disappointment; Sinaceur et al., 2013) would equally spark the creative performance of followers. For example, past research showed that intrapersonal negative emotions such as shame, which could potentially be an affective reaction to leader displays of disappointment, can be beneficial for creative performance (González-Gómez & Richter, 2015). Following from this, researchers could look at various combinations between two discrete emotions using the theoretical framework of this study and examine whether or not the effects of emotional inconsistency on creative performance hold for a variety of discrete emotion combinations. As the field investigation of another type of emotional inconsistency (e.g., between anger and disappointment) would necessitate the construction of another measurement scale, the approach to scale development and validation described in Chapter 7 as well as Chapter 8 could act as a blueprint for such future research endeavors.

From a methodological point of view, the field study reported in Chapter 8 is not without limitations. Upon closer examination of the correlation table elevated correlation coefficients (i.e., $r > .70$; Bedeian, 2014) were registered between Level 2 variables (e.g. control variables as well as epistemic motivation) and Level 1 variables (e.g., CPE and CP) that may raise the question of whether

multicollinearity could have adversely affected study results. Despite recent research showing that multicollinearity does not bias fixed and random parameter estimates in multilevel modelling analyses (Yu et al., 2015), I took several precautions to rule out the possibility of multicollinearity altogether. Drawing from the literature on affect and creativity, I would expect a high correlation between both positive as well as negative affect and creativity (Baas et al., 2008), which provides justification towards the reported association between positive and negative affectivity with general creative process engagement (CPE) as well as general creative performance (CP). Similarly, there is a theoretical basis to expect a correlation between epistemic motivation and creativity (Feist, 1998; Gocłowska et al., 2014; van Kleef et al., 2012), an association I observed in the field dataset concerning weekly creative process engagement and weekly creative performance. The existence of a theoretical rationale for the magnitude and directionality of the observed correlations should therefore lower the possibility that multicollinearity represents an issue in the dataset reported in Chapter 8 (Yu et al., 2015). Second, all study variables were centered, which both facilitates the interpretation of results and alleviates concerns regarding multicollinearity (Bell & Jones, 2015; Hofmann & Gavin, 1998). Lastly, since elevated correlation coefficients and thus potential collinearity issues mainly involved control variables (e.g., positive and negative affectivity, general CPE and CP) I performed my data analysis with and without control variables to see whether this would affect the pattern of results. However, the exclusion of control variables did not affect the directionality or significance levels of the results obtained. In sum, I conclude that multicollinearity did not adversely affect study findings in Chapter 8.

Another methodological limitation concerns the cross-sectional nature of the week-level data set reported in Chapter 8. Whilst I was able to investigate the effect of weekly changes of the study variables of interest, within the respective week the study design employed in Chapter 8 remains cross-sectional in nature

(e.g., because the diary design solely involves one measurement occasion per week; Bolger & Laurenceau, 2013). Future studies could undertake a more fine-grained examination of whether the proposed interrelationships between weekly study variables also hold when utilising three or more measurement occasions within a week. For example, it would be interesting to investigate the influence of leader emotional inconsistency at the beginning of the week on follower creative process engagement mid week, and creative performance at the end of a week (see Bono, Glomb, Shen, Kim, & Koch, 2013 for an example of within-day and Ouweneel, Le Blanc, Schaufeli, & van Wijhe, 2012 for an example of cross-day diary studies).

Lastly, I minimised the risk of common source and common method biases for all studies conducted as part of this thesis (Podsakoff et al., 2003, 2012) by obtaining external coder ratings of creative performance in the experimental studies as well as weekly manager-ratings of follower creative performance in the field study. Still, all remaining variables, including follower (weekly) creative process engagement, were assessed using self-report measures. Therefore, future studies could employ other-ratings (e.g., peer ratings) of creative process engagement in an attempt to replicate my findings. Independently of this, the fact that I was able to find a cross-level interaction effect in the weekly field study further alleviates concerns regarding common method variance (CMV) since the existence of CMV tends to suppress the detection of cross-level interactions rather than to promote it (Lai et al., 2013).

9.6 CONCLUSION

In times where a creative and innovative workforce is a highly priced asset that facilitates organisational competitiveness, leadership often becomes the deciding factor. Leaders able to ignite the creative spark in followers can be what gives the edge to one organisation over another (Mumford, Scott, Gaddis, &

Strange, 2002). Generally, concepts such as creative performance or innovation imply a sense of change (Anderson et al., 2014) and this thesis triangulates evidence from two experiments, a scale development study, and a weekly field study that illustrates that this process necessitates both leaders that enact changing nonverbal communication as well as followers with an openness for change.

The studies conducted as part of this thesis further the understanding of emotionally inconsistent leadership by emphasising that followers need to be able to make meaningful inferences from inconsistent leader emotional expressions for it to facilitate their creative functioning. Following from my study results, organisations can improve the creative potential of their workforce by implementing nonverbal communication trainings as part of their leadership development programmes in addition to selecting employees for job roles that would be receptive to emotionally inconsistent leadership (i.e., applicants with high epistemic motivation).

In sum, this thesis advances a theory-derived research model that has been replicated in both laboratory and field settings and shows that displaying emotional inconsistency represents yet another influence tactic in a leader's toolkit to inspire creative performance in followers.

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APPENDICES

APPENDIX A: Experimental Study 1 and 2 Pre-Survey

BH2287 Week 8: Creative task pre-survey
Creative task: Pre-survey

Welcome to the creative task pre-survey!

Please fill in this survey before the leader instructs you to complete the creative task.

This survey should only take about 10-15 minutes of your time. There are no right or wrong answers.

Before you start working on the survey, please enter your unique 4-digit code as well as indicate your gender and age below.

Your 4-digit code [   ]

Gender (male / female) [   ]

Age (no. of years) [   ]

Please read each of the following statements and decide how much you agree with each according to your attitudes, beliefs, and experiences. It is important for you to realise that there are no "right" or "wrong" answers to these questions. For each statement mark the circle under the number that best matches your perception.

It upsets me to go into a situation without knowing what I can expect from it.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I´m not bothered by things that interrupt my daily routine.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I enjoy having a clear and structured mode of life.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I like to have a place for everything and everything in its place.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I find that a well-ordered life with regular hours makes my life tedious.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I don´t like situations that are uncertain.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I hate to change my plans at the last minute.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I hate to be with people who are unpredictable.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

I find that a consistent routine enables me to enjoy life more.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

I enjoy the exhilaration of being in unpredictable situations.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

I become uncomfortable when the rules in a situation are not clear.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

In case of uncertainty, I prefer to make an immediate decision, whatever it may be.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

When I find myself facing various, potentially valid alternatives, I decide in favour of one of them quickly and without hesitation.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

I prefer to decide on the first available solution rather than to ponder at length what decision I should make.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

I get very upset when things around me aren´t in their place.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

Generally, I avoid participating in discussions on ambiguous and controversial problems.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
◯	◯	◯	◯	◯

When I need to confront a problem, I do not think about it too much and I decide without hesitation.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

When I need to solve a problem, I generally do not waste time in considering diverse points of view about it.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I prefer to be with people who have the same ideas and tastes as myself.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

Generally, I do not search for alternative solutions to problems for which I already have a solution available.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I feel uncomfortable when I do not manage to give a quick response to problems that I face.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

Any solution to a problem is better than remaining in a state of uncertainty.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I prefer activities where it is always clear what is to be done and how it needs to be done.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

After having found a solution to a problem I believe that it is a useless waste of time to take into account diverse possible solutions.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I prefer things to which I am used to those I do not know, and cannot predict.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I believe in the importance of art.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I have a vivid imagination.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I tend to vote for liberal political candidates.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I carry the conversation to a higher level.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I enjoy hearing new ideas.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I am not interested in abstract ideas.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I do not like art.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I avoid philosophical discussions.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I do not enjoy going to art museums.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I tend to vote for conservative political candidates.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I feel that I am good at generating novel ideas.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I have confidence in my ability to solve problems creatively.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I have a knack for further developing the ideas of others.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

I am good at finding creative ways to solve problems.

1- Strongly Disagree	2- Disagree	3- Neutral	4- Agree	5- Strongly Agree
○	○	○	○	○

APPENDIX B: Experimental Study 1 and 2 Post-Survey

Creative task: post-survey

Welcome to the creative task post-survey!

Please fill in this survey after you were instructed to complete the creative task.

This survey should only take about 10-15 minutes of your time. There are no right or wrong answers.

Please answer the following questions in relation to the leader in the scenario you just read.

Think about how you perceived the leader in the scenario and answer the questions using the rating scale below. For each question mark the circle under the number that best matches your perception.

Before you start working on the survey, please enter your unique 4-digit code in the text box below.

Your 4-digit code

To what extent did the leader in the scenario appear:

happy

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

satisfied

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

joyful

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

angry

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

irritated

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

aggravated

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

inconsistent (e.g. changing emotions)

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

changing

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

constant

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

irrational

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

odd

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

fanciful

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

unbalanced

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How much did the leader express happiness at the end of the scenario?

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How much did the leader express happiness in the scenario in general?

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How much did the leader express anger at the end of the scenario?

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How much did the leader express anger in the scenario in general?

1-Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Now please think about your own thoughts and feelings regarding the creative task and answer the following statements using the rating scale below. For each statement mark the circle under the number that best matches your own thoughts and feelings.

Please indicate to what extent you feel the following emotions right now, that is at the present moment:

interested

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

distressed

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

excited

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

upset

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

strong

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

guilty

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

scared

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

hostile

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

enthusiastic

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

proud

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

irritable

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

alert

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

ashamed

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

inspired

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

nervous

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

determined

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

attentive

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

jittery

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

active

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

afraid

1- Not at all	2- a little	3- moderately	4- quite a bit	5- extremely
○	○	○	○	○

Now please think about your thoughts and feelings during the creative task and answer the following statements using the rating scale below.

Over the past 15 minutes I felt happy.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Over the past 15 minutes I felt satisfied.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Over the past 15 minutes I felt joyful.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Over the past 15 minutes I felt angry.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Over the past 15 minutes I felt irritated.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Over the past 15 minutes I felt aggravated.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

The leader made me feel happy.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

The leader made me feel satisfied.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

The leader made me feel joyful.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

The leader made me feel angry.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

The leader made me feel irritated.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

The leader made me feel aggravated.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

I absolutely trust the leader I just saw in the scenario.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

I believe that I would give the leader I just saw in the scenario a lot of leeway.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

I think that the leader I just saw in the scenario will do the right things.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

During the creative task...

I tried to devise potential solutions that move away from established ways of doing things.

1- Not at all	2	3	4	5- Very much
○	○	○	○	○

I spent considerable time sifting through information that helps to generate new ideas.

1- Not at all	2	3	4	5- Very much
○	○	○	○	○

I spent considerable time trying to understand the nature of the problem.

1- Not at all	2	3	4	5- Very much
○	○	○	○	○

I thought about the problem from multiple perspectives.

1- Not at all	2	3	4	5- Very much
○	○	○	○	○

I searched for information from multiple sources.

1- Not at all	2	3	4	5- Very much
○	○	○	○	○

I consulted a variety of information.

1- Not at all	2	3	4	5- Very much
○	○	○	○	○

I felt that I was good at generating novel ideas.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

I had confidence in my ability to solve problems creatively.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

I had a knack for further developing the ideas of others.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

I was good at finding creative ways to solve problems.

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How much did you feel in control during the creative task?

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How much did you feel you lacked control during the creative task?

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Why were you engaged in the creative task?

Because I thought that this activity was interesting.

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because I thought that this activity was pleasant.

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because this activity was fun.

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because I felt good when doing this activity.

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

APPENDIX C: Field Study Manager General Survey

Leadership project

Leadership project: Study overview

Welcome to the leadership project survey and thank you for your interest in this study!

Study Topic:
Through this research study we hope to get a first impression on how the perception of one´s manager (or direct supervisor) has an impact on work-related outcomes within your organization.

Time Investment:
This survey should only take about 10 minutes of your time and involves rating the general levels of work performance and creativity of your employees. Please follow the instructions throughout this survey and answer the questions accordingly. A progress bar at the bottom of each page shows you the percentage of survey completion.

Data Collection and Confidentiality:
Participation in this study is voluntary and participants are free to withdraw from it. All information that will be collected will be kept strictly confidential. The principal researcher of the study is responsible for safe storage of data. In case of publication, the study data will be anonymised.

Study Purpose:
The results of this research will be used for the completion of a doctoral dissertation of the principal researcher and possibly for publication in a scientific journal.

Responsibility for Study Conduct and Data Analysis:
The principal researcher for this study is Mr Jakob Stollberger, who can be contacted via e-mail with regards to any enquiries or for provision of further information under stollbej@aston.ac.uk.

Manager code to match manager and employee responses:
In order to be able to match your ratings with those of your employees, you are required to indicate your "manager code" in the comment box below before filling in the survey. The manager code consists of your initials as well as the year of your birth e.g. for the principal researcher Jakob Stollberger the code would be "JS1986"

Please note that by clicking the "Next" button below you give your informed consent to participating in this study.

The study has been approved by the University Research Ethics Committee of Aston University.

Please enter your individual *manager code* in the comment box below (as mentioned before this consist of your initials and the year you were born in, e.g. for the principal researcher Jakob Stollberger this would be "JS1986")

Before you start with the questionnaire, please fill out these comment boxes related to demographic information.

Gender (male/female)

Age (no. of years)

Job Tenure (no. of years)

Higher Education (no. of years in college or university)

General employee performance ratings

In the following, please indicate the extent to which you agree with a series of statements regarding your employees' general levels of creativity and performance at work.

Please respond to those statements separately for each employee.

The employee code in the title refers to the respective employee you are rating.

The employee code consists of the initials of your employee as well as his/her year of birth.

General employee performance ratings for employee "XY1981"

Please indicate the extent to which you agree with the following statements regardingXY1981's general levels of creativity and performance at work.

How original and practical is "Employee code"'s work in general? Original and practical work refers to developing ideas, methods, or products that are both totally unique and especially useful to the organisation

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How adaptive and practical is "Employee code"s work in general? Adaptive and practical work refers to using existing information or materials to develop ideas, methods, or products that are useful to the organisaiton

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How creative is "Employee code"s work in general? Creativity refers to the extent to which the employee develops ideas, methods, or products that are both original and useful to the organisation

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Generally, "Employee code" fulfils all the responsibilities specified in his/her job description

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, XY1981 consistently meets the formal performance requirements of his/her job

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, "Employee code" conscientiously performs tasks that are expected of him/her

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, "Employee code" adequately completes all of his/her assigned duties

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, "Employee code" sometimes fails to perform essential duties of his/her job

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, "Employee code" sometimes neglects aspects of his/her job that he/she is obligated to perform

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Please click on the **"Done"** button below to finish and exit the survey. Thank you for your input so far!

APPENDIX D: Field Study Manager Weekly Survey

Leadership project: Study overview

Welcome to the weekly leadership project survey and thank you for your interest in this study!

Study Topic:
Through this research study we hope to get a first impression on how the perception of one´s manager (or direct supervisor) has an impact on work-related outcomes within your organization.

Time Investment:
This survey should only take about 10 minutes of your time and involves rating the *weekly levels* of work performance and creativity of your employees. Please follow the instructions throughout this survey and answer the questions accordingly. A progress bar at the bottom of each page shows you the percentage of survey completion.

Data Collection and Confidentiality:
Participation in this study is voluntary and participants are free to withdraw from it. All information that will be collected will be kept strictly confidential. The principal researcher of the study is responsible for safe storage of data. In case of publication, the study data will be anonymised.

Study Purpose:
The results of this research will be used for the completion of a doctoral dissertation of the principal researcher and possibly for publication in a scientific journal.

Responsibility for Study Conduct and Data Analysis:
The principal researcher for this study is Mr Jakob Stollberger, who can be contacted via e-mail with regards to any enquiries or for provision of further information under stollbej@aston.ac.uk.

Manager code to match manager and employee responses:
In order to be able to match your ratings with those of your employees, you are required to indicate your "manager code" in the comment box below before filling in the survey. The manager code consists of your initials as well as the year of your birth e.g. for the principal researcher Jakob Stollberger the code would be "JS1986".

Please note that by clicking the "Next" button below you give your informed consent to participating in this study.

The study has been approved by the University Research Ethics Committee of Aston University.

Please enter your individual *manager code* in the comment box below (as mentioned before this consist of your initials and the year you were born in, e.g. for the principal researcher Jakob Stollberger this would be "JS1986")

Weekly employee performance ratings

In the following, please indicate the extent to which you agree with a series of statements regarding your employees' weekly levels of performance and creativity at work.

Please respond to those statements separately for each employee.

The employee code in the title refers to the respective employee you are rating.

The employee code consists of the initials of your employee as well as his/her year of birth.

Weekly employee performance ratings for employee "XY1981"

Please indicate the extent to which you agree with the following statements regarding XY1981's levels of performance and creativity at work this week.

This week, "Employee code" fulfilled all the responsibilities specified in his/her job description

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, "XY1981" consistently met the formal performance requirements of his/her job

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, "Employee code" conscientiously performed tasks that are expected of him/her

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, "Employee code" adequately completed all of his/her assigned duties

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, "Employee code" sometimes failed to perform essential duties of his/her job

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, "Employee code" sometimes neglected aspects of his/her job that he/she is obligated to perform

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

How original and practical was "Employee code"s work this week? Original and practical work refers to developing ideas, methods, or products that are both totally unique and especially useful to the organisation

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How adaptive and practical was "Employee code"s work this week? Adaptive and practical work refers to using existing information or materials to develop ideas, methods, or products that are useful to the organisaiton

1- Not at all	2	3	4	5	6	7- Very much
◯	◯	◯	◯	◯	◯	◯

How creative was "Employee code"s work this week? Creativity refers to the extent to which the employee develops ideas, methods, or products that are both original and useful to the organisation

1- Not at all	2	3	4	5	6	7- Very much
◯	◯	◯	◯	◯	◯	◯

Please click on the **"Done"** button below to finish and exit the survey. Thank you for your input so far!

APPENDIX E: Field Study Employee General Survey

Leadership survey: Study overview

Welcome to the leadership project survey and thank you for your interest in this study!

Study Topic:
Through this research study we hope to get a first impression on how the perception of one´s manager (or direct supervisor) has an impact on work-related outcomes within your organization.

Time Investment:
This survey should only take about 10 minutes of your time and has two parts (Part 1 relating to your manager, and part 2 relating to yourself). Please follow the instructions at the top of each part and answer the survey questions accordingly. A progress bar at the bottom of each page shows you the percentage of survey completion.

Data Collection and Confidentiality:
Participation in this study is voluntary and participants are free to withdraw from it. All information that will be collected will be kept strictly confidential. The principal researcher of the study is responsible for safe storage of data. In case of publication, the study data will be anonymised.

Study Purpose:
The results of this research will be used for the completion of a doctoral dissertation of the principal researcher and possibly for publication in a scientific journal.

Responsibility for Study Conduct and Data Analysis:
The principal researcher for this study is Mr Jakob Stollberger, who can be contacted via e-mail with regards to any enquiries or for provision of further information under stollbej@aston.ac.uk.

Employee code to match manager and employee responses:
In order to be able to match your ratings with those of your manager, you are required to indicate your "employee code" in the comment box below before filling in the survey. The employee code consists of your initials as well as the year of your birth e.g. for the principal researcher Jakob Stollberger the code would be "JS1986".

Please note that by clicking the "Next" button below you give your informed consent to participating in this study.

The study has been approved by the University Research Ethics Committee of Aston University.

Please enter your individual *employee code* in the comment box below (as mentioned before this consist of your initials and the year you were born in, e.g. for the principal researcher Jakob Stollberger this would be "JS1986").

Before you start with the questionnaire, please fill out these comment boxes related to demographic information.

Gender (male/female)

Age (no. of years)

Job Tenure (no. of years)

Higher Education (no. of years in college or university)

Time you have worked together with your current manager (no.of years)

Part 1: Perceptions of your manager

The following statements refer to how you generally perceive your manager/direct supervisor at work.

There are no right or wrong answers. For each question please click on the number that best matches your perception.

In the following, please rate your manager's emotional expressions. Emotional expressions refer to emotions expressed via facial expressions, tone of voice, or body language.

When interacting with your manager, how often is his/her emotional expression constantly (i.e., all the time)...

happy

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

joyful

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

satisfied

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

angry

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

irritated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

aggravated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

When interacting with your manager, how often does his/her emotional expression change from…

happy to irritated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

happy to aggravated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

joyful to angry

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

joyful to aggravated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

irritated to happy

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

aggravated to happy

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

angry to joyful

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

aggravated to joyful

1-Not at all	2	3	4	5	6	7- Very often
◯	◯	◯	◯	◯	◯	◯

Please indicate the extent to which you agree with the following statements with regards to your manager.

I absolutely trust my manager

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
○	○	○	○	○	○	○

I believe that I give my manager a lot of leeway

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
○	○	○	○	○	○	○

I think that my manager will do the right things

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
○	○	○	○	○	○	○

My manager is an excellent manager

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
○	○	○	○	○	○	○

My manager is effective as a manager

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
○	○	○	○	○	○	○

My manager is a good manager

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
○	○	○	○	○	○	○

Leadership project

Part 2: Perceptions of yourself

The following statements refer to yourself, that is your own emotions, thoughts, as well as perceptions at work.

There are no right or wrong answers.

For each question please click on the number that best matches your perception.

It upsets me to go into a situation without knowing what I can expect from it

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I´m not bothered by things that interrupt my daily routine

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I enjoy having a clear and structured mode of life

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I like to have a place for everything and everything in its place

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I find that a well-ordered life with regular hours makes my life tedious

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I don´t like situations that are uncertain

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I hate to change my plans at the last minute

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I hate to be with people who are unpredictable

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I find that a consistent routine enables me to enjoy life more

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I enjoy the exhilaration of being in unpredictable situations

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I become uncomfortable when the rules in a situation are not clear

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

In case of uncertainty, I prefer to make an immediate decision, whatever it may be

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

When I find myself facing various, potentially valid, alternatives, I decide in favor of one of them quickly and without hesitation

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I prefer to decide on the first available solution rather than to ponder at length what decision I should make

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I get very upset when things around me aren't in their place

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, I avoid participating in discussions on ambiguous and controversial problems

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

When I need to confront a problem, I do not think about it too much and I decide without hesitation

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

When I need to solve a problem, I generally do not waste time in considering diverse points of view about it

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

I prefer to be with people who have the same ideas and tastes as myself

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

Generally, I do not search for alternative solutions to problems for which I already have a solution available

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

I feel uncomfortable when I do not manage to give a quick response to problems that I face

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

Any solution to a problem is better than remaining in a state of uncertainty

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

I prefer activities where it is always clear what is to be done and how it need to be done

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

After having found a solution to a problem I believe that it is a useless waste of time to take into account diverse possible solutions

1- Strongly disagree	2	3	4	5- Strongly agree
◯	◯	◯	◯	◯

I prefer things to which I am used to those I do not know, and cannot predict

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I typically focus on the success I hope to achieve in the future

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

I often think about how I will achieve my work goals

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

My major goal in work right now is to achieve my professional ambitions

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

In general, I am focused on achieving positive outcomes in my life

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

I often imagine myself experiencing good things that I hope will happen to me

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

Overall, I am more oriented toward achieving success than preventing failure

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

In general, I am focused on preventing negative events in my life

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

I am anxious that I will fall short of my responsibilities and obligations

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

I often worry that I will fail to accomplish my work goals

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

I often imagine myself experiencing bad things that I fear might happen to me

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

I am more oriented toward preventing losses than I am toward achieving gains

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

My major goal in work right now is to avoid becoming a failure

1- Not at all like me	2	3	4	5	6	7- Very much like me
○	○	○	○	○	○	○

In the following, please indicate to what extent you generally feel this way, that is how you feel on average:

Interested

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Excited

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Strong

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Enthusiastic

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Proud

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Alert

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Inspired

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Determined

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Attentive

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Active

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Distressed

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Upset

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Guilty

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Scared

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Hostile

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Irritable

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Ashamed

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Nervous

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Jittery

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Afraid

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Please indicate the extent to which you agree with the following statements.

Generally...

I feel drained / exhausted

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I feel very energetic

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I am often under a lot of pressure to complete my tasks on time

1- Strongly disagree	2	3	4	5	6	7- Strongly agree
○	○	○	○	○	○	○

I am not afforded much time to complete my tasks

1- Strongly disagree	2	3	4	5	6	7- Strongly agree
○	○	○	○	○	○	○

The amount of time provided to complete my tasks is short

1- Strongly disagree	2	3	4	5	6	7- Strongly agree
○	○	○	○	○	○	○

Task durations are often short

1- Strongly disagree	2	3	4	5	6	7- Strongly agree
○	○	○	○	○	○	○

Finally, please indicate the extent to which you agree with the following statements regarding your work performance.

Generally...

I try to devise potential solutions that move away from established ways of doing things

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

I spend considerable time sifting through information that helps to generate new ideas

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

I spend considerable time trying to understand the nature of the problem

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

I think about the problem from multiple perspectives

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

I search for information from multiple sources (e.g. personal memories, others' experience, documentation, Internet, etc.)

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

I consult a variety of information

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

How original and practical is your work in general? Original and practical work refers to developing ideas, methods, or products that are both totally unique and especially useful to the organisation

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How adaptive and practical is your work in general? Adaptive and practical work refers to using existing information or materials to develop ideas, methods, or products that are useful to the organisaiton

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How creative is your work in general? Creativity refers to the extent to which the employee develops ideas, methods, or products that are both original and useful to the organisation

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

Generally, I fulfil all the responsibilities specified in my job description

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, I consistently meet the formal performance requirements of my job

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, I conscientiously perform tasks that are expected of me

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, I adequately complete all of my assigned duties

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, I sometimes fail to perform essential duties of my job

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Generally, I sometimes neglect aspects of my job that I am obligated to perform

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Why are you generally engaged in your work tasks?

Because I think that my work tasks are interesting

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because I think that my work tasks are pleasant

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because my work tasks are fun

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because I feel good when completing my work tasks

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Please click on the **"Done"** button below to finish and exit the survey. Thank you for your input so far!

APPENDIX F: Field Study Employee Weekly Survey

Leadership project
Leadership survey: Study overview

Welcome to the weekly leadership project survey and thank you for your interest in this study!

Study Topic:
Through this research study we hope to get a first impression on how the weekly perception of one´s manager (or direct supervisor) has an impact on work-related outcomes within your organization.

Time Investment:
This survey should only take about 5-10 minutes of your time and has two parts (Part 1 relating to your manager, and part 2 relating to yourself). Please follow the instructions at the top of each part and answer the survey questions accordingly. A progress bar at the bottom of each page shows you the percentage of survey completion.

Data Collection and Confidentiality:
Participation in this study is voluntary and participants are free to withdraw from it. All information that will be collected will be kept strictly confidential. The principal researcher of the study is responsible for safe storage of data. In case of publication, the study data will be anonymised.

Study Purpose:
The results of this research will be used for the completion of a doctoral dissertation of the principal researcher and possibly for publication in a scientific journal.

Responsibility for Study Conduct and Data Analysis:
The principal researcher for this study is Mr Jakob Stollberger, who can be contacted via e-mail with regards to any enquiries or for provision of further information under stollbej@aston.ac.uk.

Employee code to match manager and employee responses:
In order to be able to match your ratings with those of your manager, you are required to indicate your "employee code" in the comment box below before filling in the survey. The employee code consists of your initials as well as the year of your birth e.g. for the principal researcher Jakob Stollberger the code would be "JS1986".

Please note that by clicking the "Next" button below you give your informed consent to participating in this study.

The study has been approved by the University Research Ethics Committee of Aston University.

Please enter your individual *employee code* in the comment box below (as mentioned before this consist of your initials and the year you were born in, e.g. for the principal researcher Jakob Stollberger this would be "JS1986").

Leadership project

Part 1: Perceptions of your manager this week

The following statements refer to how you perceive your manager/direct supervisor at work *this week*.

There are no right or wrong answers. For each question please click on the number that best matches your perception.

In the following, please rate your manager's emotional expressions. Emotional expressions refer to emotions expressed via facial expressions, tone of voice, or body language.

When interacting with your manager *this week*, how often was his/her emotional expression constantly (i.e., all the time)…

happy

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

joyful

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

satisfied

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

angry

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

irritated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

aggravated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

When interacting with your manager *this week*, how often did his/her emotional expression change from…

happy to irritated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

happy to aggravated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

joyful to angry

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

joyful to aggravated

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

irritated to happy

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

aggravated to happy

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

angry to joyful

1-Not at all	2	3	4	5	6	7- Very often
○	○	○	○	○	○	○

aggravated to joyful

1-Not at all	2	3	4	5	6	7- Very often
◯	◯	◯	◯	◯	◯	◯

Please indicate the extent to which you agree with the following statements with regards to your manager.

This week, I absolutely trusted my manager

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
◯	◯	◯	◯	◯	◯	◯

This week, I believe that I gave my manager a lot of leeway

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
◯	◯	◯	◯	◯	◯	◯

This week, I think that my manager did the right things

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
◯	◯	◯	◯	◯	◯	◯

This week, my manager was an excellent manager

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
◯	◯	◯	◯	◯	◯	◯

This week, my manager was effective as a manager

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
◯	◯	◯	◯	◯	◯	◯

This week, my manager was a good manager

1- Strongly disagree	2	3	4	5	6	7-Strongly agree
◯	◯	◯	◯	◯	◯	◯

Leadership project

Part 2: Perceptions of yourself this week

The following statements refer to yourself, that is your own emotions, thoughts, as well as perceptions at work this week.

There are no right or wrong answers.

For each question please click on the number that best matches your perception.

In the following, please indicate to what extent you have felt this way during the past week:

Interested

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Excited

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Strong

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Enthusiastic

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Proud

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Alert

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Inspired

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Determined

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Attentive

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Active

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Distressed

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Upset

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Guilty

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Scared

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Hostile

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Irritable

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Ashamed

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Nervous

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Jittery

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Afraid

1- Not at all	2	3	4	5- Extremely
○	○	○	○	○

Please indicate the extent to which you agree with the following statements.

This week...

I felt drained / exhausted

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I felt very energetic

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

I was often under a lot of pressure to complete my tasks on time

1- Strongly disagree	2	3	4	5	6	7- Strongly agree
○	○	○	○	○	○	○

I was not afforded much time to complete my tasks

1- Strongly disagree	2	3	4	5	6	7- Strongly agree
◯	◯	◯	◯	◯	◯	◯

The amount of time provided to complete my tasks was short

1- Strongly disagree	2	3	4	5	6	7- Strongly agree
◯	◯	◯	◯	◯	◯	◯

Task durations were often short

1- Strongly disagree	2	3	4	5	6	7- Strongly agree
◯	◯	◯	◯	◯	◯	◯

Finally, please indicate the extent to which you agree with the following statements regarding your work performance this week.

This week, I was trying to devise potential solutions that move away from established ways of doing things

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

This week, I was trying to sift through information that helps to generate new ideas

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

This week, I was spending time trying to understand the nature of the problem

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

This week, I was thinking about the problem from multiple perspectives

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

This week, I was searching for information from multiple sources (e.g. personal memories, others' experience, documentation, Internet, etc.)

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

This week, I was consulting a variety of information

1- Not at all like me	2	3	4	5- Very much like me
○	○	○	○	○

How original and practical was your work this week? Original and practical work refers to developing ideas, methods, or products that are both totally unique and especially useful to the organisation

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How adaptive and practical was your work this week? Adaptive and practical work refers to using existing information or materials to develop ideas, methods, or products that are useful to the organisaiton

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

How creative was your work this week? Creativity refers to the extent to which the employee develops ideas, methods, or products that are both original and useful to the organisation

1- Not at all	2	3	4	5	6	7- Very much
○	○	○	○	○	○	○

This week, I fulfilled all the responsibilities specified in my job description

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, I consistently met the formal performance requirements of my job

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, I conscientiously performed tasks that are expected of me

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, I adequately completed all of my assigned duties

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, I sometimes failed to perform essential duties of my job

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

This week, I sometimes neglected aspects of my job that I am obligated to perform

1- Strongly disagree	2	3	4	5- Strongly agree
○	○	○	○	○

Why were you engaged in your work tasks this week?

Because I thought that my work tasks were interesting

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because I thought that my work tasks were pleasant

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because my work tasks were fun

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Because I felt good when completing my work tasks

1- Corresponds not at all	2	3	4	5	6	7- Corresponds exactly
○	○	○	○	○	○	○

Please click on the **"Done"** button below to finish and exit the survey. Thank you for your input so far!

APPENDIX G: Experimental and Field Study items with corresponding scales

I. Experimental study scales:

a) Epistemic motivation (Personal need for structure): (Neuberg & Newsom, 1993; van Kleef et al., 2009)

Please read each of the following statements and decide how much you agree with each according to your attitudes, beliefs, and experiences. It is important for you to realise that there are no "right" or "wrong" answers to these questions.

1. It upsets me to go into a situation without knowing what I can expect from it.

2. I´m not bothered by things that interrupt my daily routine.

3. I enjoy having a clear and structured mode of life.

4. I like to have a place for everything and everything in its place.

5. I find that a well-ordered life with regular hours makes my life tedious.

6. I don´t like situations that are uncertain.

7. I hate to change my plans at the last minute.

8. I hate to be with people who are unpredictable.

9. I find that a consistent routine enables me to enjoy life more.

10. I enjoy the exhilaration of being in unpredictable situations.

11. I become uncomfortable when the rules in a situation are not clear.

b) Creative process engagement: (To, Fisher, Ashkanasy, & Rowe, 2012)

Please indicate the extent to which you agree with the following statements:

During the task…

1. I tried to devise potential solutions that move away from established ways of doing things.

2. I spent considerable time sifting through information that helps to generate new ideas.

3. I spent considerable time trying to understand the nature of the problem.

4. I thought about the problem from multiple perspectives.

5. I searched for information from multiple sources (e.g. personal memories, others' experience, documentation, Internet, etc.)

6. I consulted a variety of information.

II: Field study scales:

General survey measures:

a) Epistemic motivation (Personal need for structure): (Neuberg & Newsom, 1993; van Kleef et al., 2009)

Please read each of the following statements and decide how much you agree with each according to your attitudes, beliefs, and experiences. It is important for you to realise that there are no "right" or "wrong" answers to these questions.

12. It upsets me to go into a situation without knowing what I can expect from it.

13. I´m not bothered by things that interrupt my daily routine.

14. I enjoy having a clear and structured mode of life.

15. I like to have a place for everything and everything in its place.

16. I find that a well-ordered life with regular hours makes my life tedious.

17. I don´t like situations that are uncertain.

18. I hate to change my plans at the last minute.

19. I hate to be with people who are unpredictable.

20. I find that a consistent routine enables me to enjoy life more.

21. I enjoy the exhilaration of being in unpredictable situations.

22. I become uncomfortable when the rules in a situation are not clear.

b) Positive and negative affectivity: (Watson, Clark, & Tellegen, 1988)

Indicate to what extent you generally feel this way, that is how you feel on average:

1. Interested

2. Excited

3. Strong

4. Enthusiastic

5. Proud

6. Alert

7. Inspired

8. Determined

9. Attentive

10. Active

11. Distressed

12. Upset

13. Guilty

14. Scared

15. Hostile

16. Irritable

17. Ashamed

18. Nervous

19. Jittery

20. Afraid

c) General creative performance: (Oldham & Cummings, 1996)

1. How original and practical is your work in general? Original and practical work refers to developing ideas, methods, or products that are both totally unique and especially useful to the organisation.

2. How adaptive and practical is your work in general? Adaptive and practical work refers to using existing information or materials to develop ideas, methods, or products that are useful to the organisaiton.

3. How creative is your work in general? Creativity refers to the extent to which the employee develops ideas, methods, or products that are both original and useful to the organisation.

Weekly survey measures:

a) Weekly leader emotional inconsistency: Scale developed in Chapter 7

In the following, please rate your manager's emotional expressions. Emotional expressions refer to emotions expressed via facial expressions, tone of voice, or body language.

When interacting with your manager this week, how often did his/her emotional expression change from…

1. happy to irritated.

2 happy to aggravated.

3. joyful to angry.

4. joyful to aggravated.

5. irritated to happy.

6. aggravated to happy.

7. angry to joyful.

8. aggravated to joyful.

b) Weekly consistent happiness and anger: (van Kleef et al., 2006)

When interacting with your manager this week, how often was his/her emotional expression constantly…

1. happy

2. joyful

3. satisfied

4. angry

5. irritated

6. aggravated

c) Weekly creative process engagement: (To, Fisher, Ashkanasy, & Rowe,

2012)

Please indicate the extent to which you agree with the following statements:

This week…

1. I tried to devise potential solutions that move away from established ways of

    doing things.

2. I spent considerable time sifting through information that helps to generate new ideas.

3. I spent considerable time trying to understand the nature of the problem.

4. I thought about the problem from multiple perspectives.

5. I searched for information from multiple sources (e.g. personal memories, others' experience, documentation, Internet, etc.)

6. I consulted a variety of information.

d) Weekly creative performance: (Oldham & Cummings, 1996)

1. How original and practical was your work this week? Original and practical work refers to developing ideas, methods, or products that are both totally unique and especially useful to the organisation.

2. How adaptive and practical was your work this week? Adaptive and practical work refers to using existing information or materials to develop ideas, methods, or products that are useful to the organisaiton.

3. How creative was your work this week? Creativity refers to the extent to which the employee develops ideas, methods, or products that are both original and useful to the organisation.

e) **Weekly time pressure:** (Maruping et al., 2015)

This week…

1. I was often under a lot of pressure to complete my tasks on time.

2. I was not afforded much time to complete my tasks.

3. The amount of time provided to complete my tasks was short.

4. Task durations were often short.

APPENDIX H: Video experiment manipulation text

Is the stream working?

Hello everyone!

As you know my name is Carl Smith and I am a senior manager at Innovate Inc. Our work involves the development of marketing campaigns and we have already worked for many Fortune 500 companies. I myself graduated in 2000 with an MBA from Aston Business School and kept in touch with the university since then.

Well, at the moment I am working on a project for the world´s biggest chemical company. We are developing a TV commercial that advertises their genetically modified potatoes that, for example, are more resistant to common potato diseases than ordinary potatoes. So the ad will be all about potatoes.

And this is where you come in. In order to assist me with my project your task will be to come up with as many ways as possible to use a potato. We may use some of your suggestions in the TV commercial we are currently preparing.

Ok, you have eight minutes to generate as many ideas as you can after which my colleague here will collect what you have come up with. In my experience people do not tend to have any more original ideas after this much time anyway. Alright, you can start the task now…

Pages 318 - 325 removed for data protection purposes.