A Multilevel Model of Transformational Leadership, Affect,

and Creative Process Behavior in Work Teams

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Abstract

We develop a multilevel model to explain how affect and transformational leadership (TFL) influence team creative process behavior. We theorize, in particular, that a dual-level model of TFL, which incorporates both individual-focused TFL (addressing the individual differences of team members) and group-focused TFL (addressing the team as a whole) underlies affect-creativity relationships. We argue moreover that these effects exist across three conceptual levels: (1) within-person, (2) interpersonal, and (3) group. We conclude with a discussion of the theoretical implications and limitations of our model and suggest potential avenues for future research.

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An enduring and as yet unsolved issue in leadership research concerns the question of what leaders can do to foster creative followers (Shin & Zhou, 2003). In this instance, we broadly define team creativity as the process by which team members work together to produce solutions that are both novel and useful (Amabile, 1988, 1996; George & Zhou, 2002, 2007; Oldham & Cummings, 1996). We address in particular the effects of transformation leadership (TFL) on creative processes occurring in teams. Consistent with Bass (1985), we define TFL as a form of leadership intended to motivate and inspire followers to pursue higher-order goals through the transformation of followers' attitudes, beliefs, values, and behaviors. We also draw on the emerging perspective that recognizes TFL as a dual-level phenomenon involving simultaneous focus on both the group as a whole and the individuals who comprise the group (Wang & Howell, 2010; Wu, Tsui & Kinicki, 2010). Moreover, recognizing that TFL inherently involves management of follower's emotions, we include affect as a multilevel intermediary source of creativity (George, 2007; George & Zhou, 2002, 2007). In particular, creative processes are distinct from creative outcomes, and vary dynamically from moment-to-moment (Amabile, Barsade, Mueller and Staw, 2005; To, Fisher, Ashkanasy, & Rowe, 2012). In this article, therefore, we seek to develop an integrated model and to propose specific propositions concerning the role of TFL in engendering the affect-creativity nexus. We aim to do so across three levels of conceptualization: (1) within-person (temporal variability within-person), (2) interpersonal (dyadic relationships), and (3) group (collective perceptions).

A basic premise of our theory is that to be creative, a team member may not only engage in her or his own tasks, but s/he also needs to engage in social exchanges with coworkers, such

as sharing ideas (George, 2007; Hennessey & Amabile, 2010; Zhou & Hoever, 2014). Moreover, while creativity has been shown to involve affect (Amabile et al., 2005; George & Zhou, 2002; 2007; Tsai, Chi, Grandey, & Fung, 2012; To, Fisher, & Ashkanasy, in press), the behavioral implications of affective experiences can be complicated insofar as their effects are not necessarily parallel across levels (e.g., Ashkanasy, 2003; Ashkanasy & Humphrey, 2011). For instance, an engineer who feels frustrated by her recent task progress may persist longer in searching for better alternatives; while the same person may react angrily in response to feeling frustrated with her coworkers.

To untangle the complexity of such affect-creative process relationships, we posit a more integrated approach – one that considers the forces operating at multiple levels within a work team – would seem to be theoretically and practically important (e.g., George, 2007; Hennessey & Amabile, 2010; Zhou & Hoever, 2014). The major focus of this article therefore is to present a multilevel view of research on affect and creativity in teams and to address how leadership behaviors may serve as contextual factors underlying the affect-creative process relationships at different levels (e.g., Baas, De Dreu, & Nijstad, 2008; Grawitch, Munz, Elliot, & Mathis, 2003; Jones & Kelly, 2009; Tsai et al., 2012). As such, we believe that our conceptual model contributes to the burgeoning literature on affect, creativity, and TFL in three respects.

First, by conceptualizing affect and creative behavior as multilevel constructs, we respond to calls by scholars (e.g., see Ashkanasy, 2003; Geroge & Zhou, 2007; Zhou & Hoever, 2014) to integrate the existing research on affect and creativity at three levels (within-person, interpersonal, and group). This integration is important because it holds potential to provide a better understanding as to how the affect-creative process relationship can coexist at each of the three levels.

Second, we respond to Gooty, Connelly, Griffith, and Gupta's (2010) call to explore how TFL impacts on followers' affective experiences and work outcomes. Building upon Rajah, Song & Arvey (2011), George and Zhou (2007), and Mumford, Bedell-Avers and Hunter (2008), we develop a new perspective to understand how the dual-level nature of TFL (i.e., combining group- and individual-focused TFL behaviors) can influence followers' positive or negative affect when engaging in creative process behavior. This is especially imperative because existing research has often overlooked the implications of dual functions of TFL, in other words, some TFL behaviors can be directed toward individual followers, while other such behaviors can be directed toward the group as a whole (Kark & Shamir, 2002).

Third, while past research has focused on investigating the main effect of the dual model of TFL on level-specific outcomes, we take this a step further by theorizing that both individual- and group-focused TFL behaviors are critical boundary conditions influencing relationships between affect and creative processes across levels. We seek to synthesize literatures on leadership, affect, and creativity literatures, to develop an integrated multilevel framework applicable to work-team behavior in modern complex organizations. In particular we seek to show how individual- and group-focused TFL behaviors align with specific levels of affect and creativity, including relationships at different levels of conceptualization (Gooty et al., 2010; Gooty, Gavin, & Ashkanasy, 2009).

In the remainder of this article, we address our aims in three parts. First, we review the existing literature about the multilevel nature of TFL, affect, and creativity. Second, we develop three propositions concerning the moderating role of dual-level TFL on the relationship between affect and creative processes – across three levels of analysis. Finally, we discuss the implications and limitations of our theorizing and suggest potential avenues for future research.

A Multilevel Perspective

TFL as a Multilevel Construct

Central to the theme of this article, we propose TFL to be a critical boundary condition that moderates the relationships between affect and creative processes across levels. We focus on TFL for two main reasons. First, as George (2007) and Gooty et al. (2010) note, TFL has received more substantial research attention than any other leadership approach in both emotions and creativity research. Second, there is now compelling evidence to suggest TFL is a multilevel construct that manifests functional characteristics at both individual and team levels (Avolio & Bass, 1995; Jung, Yammarino, & Lee 2009; Klein, Dansereau, & Hall, 1994; Liao & Chuang, 2007).

Moreover, and as we noted earlier, Bass (1985) defined TFL as a form of leadership that, via transformation of followers' attitudes, beliefs, values, and behaviors, is intended to inspire followers to pursue higher-order goals and to exert extraordinary effort in pursuit of organizationally-relevant goals. Avolio (1999) and Bass (1998) subsequently proposed that TFL encompasses four types of behavior: (1) raising followers to a higher level of achievement (*idealized influence*); (2) motivating followers to transcend their personal interests for collective welfare (*inspirational motivation*); (3) developing followers' abilities to facilitate their own personal growth (*individualized consideration*), and (4) developing followers' intellectual ability to approach problems in new ways (*intellectual stimulation*). These behaviors suggest that TFL is both dynamic and effective in shaping followers' attitudes and behaviors to achieve individual and team outcomes. Subsequent research (e.g., see Judge & Piccolo, 2004; Liao & Chuang, 2007; Wang, Oh, Courtright, & Colbert, 2011) has confirmed that TFL has significant impact on a wide range of work outcomes at both individual and team levels.

The development of the TFL theory has emerged from two separate streams. Earlier theories focused on the influence of leadership behaviors on individual followers (e.g., Bass, 1985; Bennis & Nanus, 1985), assuming that the same leader may display different behaviors toward each follower. More recently, TFL has come to be conceptualized as a group-level construct that emphasizes followers' shared perceptions about a leader's leadership behaviors (see Bass, Avolio, Jung, & Berson, 2003; Schaubroeck, Lam, & Cha, 2007). While these two lines of research have been dominated in the TFL literature separately, little attention has yet been directed to integrating both conceptualizations for new research inquiry. Recently, researchers such as Wang and Howell (2010) and Wu, Tsui, and Kinicki (2010) have begun to argue that the four dimensions of TFL should be reconceptualized as a *dual-level* model: group-focused and individual-focused. Thus, on the one hand, "idealized influence" and "inspirational motivation" emphasize that transformational leaders display *similar* behaviors towards the group as a whole (e.g., communicating a compelling vision to the whole group) while, on the other hand, "individualized consideration" and "intellectual stimulation" imply that the same leaders exhibit *different* behaviors in addressing the uniqueness of each member in a group (e.g., provide a personalized coaching to each group member).

Research prior to the dual-level conceptualization tended to treat all TFL dimensions as indicators of an overall single higher order leadership factor. This single factor view has been based on the high intercorrelations found among the sub-dimensions of TFL. As Schriesheim, Wu and Scandura (2009) argue, however, the level of analysis of most Multifactor Leadership Questionnaire items is ambiguous because they do not have a clear referent target (e.g., "Expresses confidence that goals will be achieved"). As a result, survey participants may use an individual context rather than a group context as a frame of reference when they respond to items

and *vice versa*. Following this suggestion, it is important to provide an appropriate referent (i.e., either individual or group) for each item to ensure that the level of the theory and the level of the measurement align.

In support of the dual-level model of TFL, there is now evidence to show that group-focused and individual-focused TFL exert unique effects on underlying process variables and outcomes at particular levels of conceptualization. Wu and his colleagues (2010), for example, found that group-focused TFL is related to collective efficacy via group identification instead of personal identification, whereas individual-focused TFL is associated with self-efficacy via personal identification rather than group identification. Likewise, Tse and Chiu (2014) found that group-focused TFL affects helping behavior towards the group through the mediating role of group identification, rather than through individual differentiation. Furthermore, individual-focused TFL appears to determine followers' creative behavior through the mediating effect of individual differentiation, rather than through group identification (Tse & Chiu, 2014).

Affect as a Multilevel Construct

Affect researchers (e.g., Ashkanasy, Härtel, & Zerbe, 2000; Barsade & Gibson, 2012; Weiss, & Cropanzano,1996) define affect as a general form of subjective feelings that incorporate longer-lasting but less intense moods, as well as more specific and intense emotions. As such, affect is usually described using two dimensions: *valence* and *activation* (Russell & Barrett, 1999; Watson, Clark, & Tellegen, 1988). Valence refers to the subjective experience of how well an individual is doing in terms of a hedonic tone of pleasant vs. unpleasant. Activation, on the other hand, "refers to a sense of mobilization or energy and summarizes one's physiological state in terms of its level of activation or deactivation" (Seo, Barrett, & Bartunek, 2004, p. 426). Similar terms (used to describe activation) include arousal, energy, tension, or

behavioral readiness. Thus, while some positive feelings are activating (e.g., excited, enthusiastic), others are deactivating (e.g., calm, relaxed). Similarly, some feelings are negative in tone with high activation (e.g., anxious, angry), while other negative feelings are deactivating (e.g., discouraged, bored). While affective valence has traditionally been regarded as the more influential dimension of job-related affect (e.g., see Fisher, 2010 for a review), more recent evidence (Bindl & Parker, 2012; Seo, Bartunek, & Barrett, 2010; To et al., 2012) suggests that affective activation also plays an important role in motivating job behaviors. In this article, therefore, we focus on positive and negative affective states with high activation.

Moving on now to build a multilevel view of affect, we note that Ashkanasy (2003) identified five levels of conceptualization in affect research that can be applied to organizations: (1) within-person, (2) between-persons, (3) interpersonal interactions, (4) group, and (5) organization-wide. Ashkanasy argued further that the model is integrated across the five levels through a common thread based on an underlying neurobiology of affect. Level 1 (within-person) is the foundation of the model, focusing on momentary variations in within-person affect as experienced by individual organizational members. Research on affective states has been typically studied at this within-person level (Fisher & To, 2012; Weiss & Cropanzano, 1996). Level 2 (between-persons) represents more stable individual differences in affective experience and attitude, which includes, for example, trait affectivity (Watson & Tellegen, 1985). Level 3 (interpersonal or dyadic interactions) focuses on perception of affect in interpersonal exchanges. Level 4 (group) focuses on affect as a collective experience shared by team members, including group affective tone (George, 1990) and emotional contagion (Hatfield, Cacioppa, & Rapson, 1992). Level 5 (organization-wide) deals with the organization as a whole. In this respect,

Ashkanasy quoted De Rivera's (1992) definition of emotional climate as an objectively shared phenomenon that can be "palpably sensed."

Creative Process as a Multilevel Construct

Amabile (1988, 1996) defines creativity as production of ideas or solutions that are both novel and useful for problem solving and/or improvement (see also George & Zhou, 2002, 2007; Oldham & Cummings, 1996). To date, however, organizational researchers have tended to conceptualize and to measure creativity in terms of the *outcome-based* standards of novelty and usefulness. For example, a commonly adopted approach to assess creativity involves observer assessments, in which a supervisor or a peer rates individual subordinates' overall or typical levels of creative performance at work (e.g., George & Zhou, 2002, 2007; Madjar, Oldham, & Pratt, 2002). This approach, while helpful to investigate individual difference in creativity, tends to presume that creativity is a stable attribute of an individual, irrespective of the potential for systemic variance across occasions (Amabile et al., 2005; Binnewies & Wörnlein, 2011; Ohly & Fritz, 2010; To et al., 2012).

In fact, people do not always perform at their best (Beal, Weiss, Barros, & MacDermid, 2005). Owing to the traditional reliance cross-sectional research, however, the variable nature of creativity has until recently not been studied in organizational research (To et al., 2012; in press). In particular, recent experience sampling studies by researchers such as Binnewies and Wörnlein (2011), Ohly and Fritz (2010) and To and his colleagues (2012; in press) demonstrate that an individual's creativity does indeed vary substantially over a short period of time.

Another problem is that the definitions of creativity used in past research are often inconsistent (Amabile et al., 2005; Binnewies & Wörnlein, 2011; Ohly & Fritz, 2010; To et al., 2012). In the present article, and in line with the idea that creativity is something that varies

dynamically, we focus on the process view advocated by creativity researchers (such as Mumford, Mobley, Uhlman, Reiter-Palmon, & Doares, 1991; Mumford, Scott, Gaddis & Strange, 2002; Shalley et al., 2004). In particular, we adopt Drazin, Glynn and Kazanjian's (1999, p. 287) view that it represents a momentary "process of engagement in creative acts" to produce novel and potentially useful ideas. The triggers of these processes can be formal (e.g., a planned act) or informal (e.g., sudden inspirations). This "momentary" view of creativity offers two clear advantages over traditional approaches.

First, and as George and Zhou (2007) point out, a key challenge of future (affect-creativity) research is to identify meaningful creative performance that can be assessed in the moment. The momentary perspective provides an alternative lens for understanding how naturally occurring experiences such as affect or other states in the flow of employees' work lives are related to ongoing creativity.

Second, and as discussed in Drazin et al. (1999) and Shalley, Zhou and Oldham (2004), our perspective points to the importance of distinguishing creative outcomes from creative processes. Davis (2009, p. 25) stresses in particular that, although the two standards (novelty and usefulness) for recognizing creative outcomes are essential, a question remains as to what processes bring about creative outcomes. While momentary creative processes may not necessarily produce immediate outcomes, they can nevertheless supply information or materials that may yield original solutions and insights later – after more ideas are discovered and combined (Nijstad, De Dreu, Rietzschel, & Baas, 2010). This process-based view recognizes the value of understanding the transient processes by which ultimate outputs emerge; thus offering a lever for us to understand how to improve eventual creative outcomes (Mumford, 2000).

At the within-person level, an employee may not be able to "be creative" on demand volitionally, but they can choose to engage in more or less of the processes known to lead to eventual creative outcomes. According to Zhang and Bartol (2010), such creative processes encompass three dimensions: (1) problem identification (e.g., framing and reframing of a problem); (2) information searching and encoding (e.g., consulting and combing information from different sources); and (3) idea and alternative generation (e.g., producing better alternative solutions to problems). Zhang and Bartol (2010) conclude in particular that the three dimensions form a single overall construct positively related to supervisor-rated creative performance. More recently, To and his colleagues (2012; in press) demonstrated in two experience sampling studies that engagement in creative processes fluctuates across time, ebbing and flowing from moment to moment (see also Drazin et al., 1999).

Engagement in creative processes also takes place at collective levels. Amabile (1988, 1996) considers collective and individual processes of creativity to be of similar composition, since both involve similar cognitive activities. Drazin et al. (1999) also note, "Groups also go through stages that mirror the processes of individuals-that is, developing criteria, generating alternatives, modifying those alternatives, and amplifying and extending original ideas" (p. 291).

Despite these similarities, however, collective creative processes differ in important ways from individual creativity. This is because creative processes at the group (or dyadic) level result from a particular point in time when a group of individual perspectives and experiences are brought together to produce new insights (Hargadon & Bechky, 2006). A typical example can be found in brainstorming, where collective cognition can take place to transform existing knowledge into creative action alternatives (Hargadon & Bechky, 2006). Moreover, collective

creative processes can take place in situations when either a whole team or a pair of coworkers works together.

A corollary of foregoing discussion is that individuals and groups participate in creative processes in an iterative fashion (Drazin et al., 1999). Building upon Ashkanasy's (2003) multilevel emotion model, we hold that engagement in creative processes can occur across levels within a team. For example, Worker A, who experiences an "Aha!" moment at a particular point in time (at the within-person level) may choose to discuss the new idea with Coworker B (at the interpersonal level). Both parties might then discuss the idea with other team members in order to tease out further issues and to consolidate their own ideas. Members may then resume their work in solitude, later returning to the other members of the group for further idea modification and enhancement.

Transformational Leadership, Affect, and Creativity

Having established that the three key constructs in our theory (TFL, affect, creative processes) are inherently multilevel, we now turn to consideration of how the three can be integrated in a model of creativity and leadership. In this regard, leadership has long been recognized for its critical role in providing a creative work context (George & Zhou, 2007; Oldham & Cummings, 1996; Shalley et al., 2004; To et al., 2012). Consistent with our arguments that these are multilevel constructs, it seems reasonable to conclude that TFL is a cross-level construct that shapes the affect-creative process relationships at multiple levels. As we noted earlier, authors such as Tse and Chiu (2014), Wang and Howell (2010) and Wu et al. (2010) have demonstrated the impacts of TFL across levels in a team setting. In particular, the evidence suggests that group-focused TFL is likely to be associated with team-level processes and outcomes; while individual-focused TFL is likely to be related to individual-level processes

and outcomes (Tse & Chiu, 2014; Wang & Howell, 2010; Wu et al., 2010).

Nonetheless, although the implication of the dual-level model of TFL has already been made explicit in the literature, research to date has focused exclusively on examining the direct effect of the dual-level model of TFL on specific outcomes at different levels. As such, a question remains as to the role of both group- and individual-focused TFL on the multilevel affect-creative process relationship. In this review, we propose specifically that the dual-effect model of TFL (i.e., group-focused vs. individual-focused TFL) implies different mechanisms at each level shape the affect-creative process relationship. In so doing, we respond to the call by Gooty and her colleagues (2010) to examine how TFL might shape followers' affective experience leading to work outcomes from a multilevel perspective. In summary, and drawing on a growing body of research (e.g., George & Zhou, 2007; Rajah et al., 2011 for a review), we theorize that group-and individual-focused TFL act as differentiated contextual facilitators that enable followers to translate their affective state into creativity.

Model Development and Propositions

Based on recent experience sampling research (e.g., Amabile et al., 2005; To et al., 2012; in press), we know affective states influence fluctuations in creative processes at the within-person level of analysis. Moreover, the research consensus until recently (see Baas et al., 2008 for a review; Fredrickson, 1998; Isen 1999) was that positive – rather than negative –affect facilitates creativity. More recent evidence from both laboratory and field studies (Binnewies & Wörnlein, 2011; De Dreu, Baas, & Nijstad, 2008; To et al., 2012) however, suggest that affective valence needs to be considered in concert with affect activation if we are to understand the true nature of complicated affect-creativity relationships.

In particular, the more integrated view now emerging from recent literature suggests that creativity can be achieved via two pathways: either (1) enhanced cognitive flexibility engendered by positive affect or (2) increased persistence promoted by negative affect (De Dreu et al., 2008; George & Zhou, 2007; Nijstad et al., 2010; To et al., 2012). This evidence suggests moreover that the arousal accompanying activating affective states can provide motivation and cognitive energy beneficial for creativity. More particularly, it seems that activating positive affect promotes creativity by leading people to feel less constrained, to experience the situation as unproblematic, to think flexibly, and to act in a more generative way.

Although negative affect can lead to reduced cognitive flexibility and off-task ruminative thoughts that interfere rather than foster on-task performance (Beal et al., 2005), it can also serve to engender creative processes in certain situations (Baas et al., 2008; Friedman & Förster, 2010). In this case, creativity is the result of sustained hard work, perseverance, active coping, and prolonged effort toward producing in-depth, unusual, and original solutions (De Dreu et al., 2008; George & Zhou, 2007; Seo et al., 2004). In effect, negative affect acts as a form of problem signal that promotes a detail-oriented, analytic approach to understanding the nature of the problem, reduced reliance on preexisting schemas or scripts, and greater effort to improve matters (George & Zhou, 2002, 2007; Schwarz & Clore, 2003).

Moreover, while activating affect can play a role in fostering creativity, recent meta-analytical reviews by Baas et al. (2008) and Davis (2009) suggests that the effects of negative feelings on creativity tend to be more complex and sensitive to context than those of positive feelings. Indeed, in some cases, negative affect can even interfere rather than foster on-task performance (Baas et al., 2008; Beal et al., 2005).

Research (e.g., Jones & Kelly, 2009; Tsai et al., 2012; see Zhou & Hoever, 2014 for a review) has also recently touched upon the role of affect as an influence on collective creativity at group and interpersonal levels of analysis. In particular, collective affective experiences have been shown to influence creative behaviors, essentially mirroring affective effects at the within-person level. For example, Grawitch and his colleagues (Grawitch, Munz, Elliott, & Mathis, 2003; Grawitch, Munz, & Kramer, 2003) found in two laboratory studies that, *ceteris paribus*, happy individuals working together are more creative than other groups. Similarly, Kelly and her associates (Jones & Kelly, 2009; Kelly & Spoor, 2007) found support for the idea that a group's shared negative affective tone communicates a problematic environment, thereby prompting more persistent efforts to discover a creative solution to a problem (rather than settling prematurely on inferior solutions).

These adaptive (or mirroring) effects do not necessarily occur, however. In a recent field study for example, Tsai et al. (2012) found no support for the idea that team members sharing an activating positive affect work together more creatively. Rather, Tsai and his colleagues found that the members' collective pleasantness is negatively related to team creativity when trust is high. Thus, from a group-centric perspective, the problem-free signal flowing from positive affect might only serve to promote groupthink (George & King, 2007; Tsai et al., 2012). George and King (2007) argue further that these positive affect effects, when experienced collectively in a group, tend to reinforce each other and thus sometimes even discourage members from thinking divergently (George & King, 2007).

The potentially maladaptive effects of activating negative affect on team functioning are also evident in recent group research (see Chi & Huang, 2014). Negative affective experiences that intensify interpersonal incompatibility can undermine cooperation and completion of task

goals (e.g., Kelly & Spoor, 2007), which in turn can block creative idea exchanges among team members. In summary therefore, while the energy provided by activating affective states can be channeled to on-task endeavors and can therefore serve as a creative asset, activating affect may also inhibit creative processes, especially when people experiencing the high arousal are focused on interpersonal issues.

Finally we note that the affective effects operating at different levels within a team may not necessarily act in parallel. In the following section, we utilize the dual-level model of transformational leadership to explain why both group-focused and individual-focused TFL might act in effect as a boundary condition that, in turn, shapes the affect-creative process relationship at different levels within work teams.

The Dual-Level Model of Transformational Leadership

According to Wu and his colleagues (2010; see also Wang and Howell, 2010), the dual-level model of TFL is designed to help us understand the dynamic interplay between the individuals within a team and the team as a whole. In particular, the model helps to clarify whether TFL is an individual or a team-level leadership construct (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007). We argue that individual-focused TFL affects the affect-creative process relationship at both within-person and inter-personal levels, while group-level TFL affects this relationship only at the group level.

Individual-focused TFL. In the instance of individual-focused TFL, leaders view each team member as unique and therefore treat team members differentially (Dansereau, 1995). It follows then that all team members cannot be expected to share a similar perception of leadership effectiveness. This is because individual-focused TFL instigates within-group differences in members' experiences of leadership (Graen & Uhl-Bien, 1995). Individual-

focused transformational leaders thus tend to form a close relationship with each follower, who

is in turn likely to experience increased identification with the leader rather than with the team as

whole (Graen & UhI-Bien, 1995; Kark & Shamir, 2002; Lord & Brown, 2004).

In this regard, two examples of individual-focused TFL behaviors might be: (1) providing

individualized support to each follower, while coaching and empowering each of them to his/her

full potential; (2) changing each follower's problem awareness by challenging existing ways of

doing things based on the follower's intellectual capabilities (Tse & Chiu, 2014; Wu et al., 2010).

This implies that individual-focused TFL is likely to be effective in determining interpersonal

and within-person processes and outcomes in organization.

Group-focused TFL. In contrast to individuals-focused TFL, group focused TFL leaders

view the group as a unified whole and treat each team member the same (Yammarino, Dionne, &

Chun, 2002). All team members are therefore likely to share a collective schema about their

leader (Yammarino & Bass, 1990). Group-focused TFL can thus be expected to influence team

members' team identification. This should also facilitate a shared cognitive process wherein

each member defines her or his self in terms of relationships to the group as a whole (Brewer &

Gardner, 1996). In this regard, two examples of group-focused TFL behaviors might be:

(1) articulating a new compelling vision and communicating it to the whole group; (2) inspiring

all team members to internalize the new vision as part of their beliefs and values, and also to

define themselves based on the team's success and identity (Tse & Chiu, 2014; Wu et al., 2010).

The Moderating Role of Individual-Focused TFL at the Within-Person Level

Consistent with the foregoing, we propose that leaders' individual-focused TFL behaviors

(individualized consideration and intellectual stimulation) most effectively facilitate followers to

extract creative benefits from their momentary activating positive and negative affect. As with

individualized consideration, leaders thus take into account their followers' unique

characteristics when producing intellectual stimulation (Bass, 1985). Such leaders, who have a

high awareness of each follower's uniqueness, thus should be better able to assign tasks that fit

with a follower's capability, and also to provide customized learning and task mastery

opportunities for the person (Gong, Huang, & Farh, 2009; Wu et al., 2010).

This conclusion is also in line with recent evidence (e.g., Tse & Chiu, 2014; Wang &

Howell, 2010; Wu et al., 2010) supporting the idea that followers who perceive higher

individual-focused TFL behaviors are more self-efficacious and have higher personal initiative

for seeking out better ways to improve their task. For these followers, a positive affective state

(e.g., feeling enthusiastic or excited) is likely to prompt the individual to go beyond habitual

acting and to try out new ideas that might flow from their divergent thinking (Fredrickson, 1998;

2001). To these group members, the somewhat risky and exploratory task activities incurred in

creative behavior are likely to be viewed as opportunities beneficial to their improvement and

learning (To, Ashkanasy, Fisher, & Rowe, 2010; To et al., 2012).

In contrast, subordinates who receive less individualized consideration and intellectual

simulation from their leader are less likely to have a creative, proactive frame of mind. They are

therefore less likely to 'think outside the box' and to engage in extra-role activities (Tse & Chiu,

2014; Wang & Howell, 2010; Wu et al., 2010). During a positive affective state, these

individuals can therefore be expected to direct their enhanced energy to a more familiar task as a

means to ensure efficiency, but not necessarily to engage in risk-prone creativity (Janssen & Van

Yperen, 2004; To et al., 2012). In this view, a line of laboratory research has indicated that happy

individuals may avoid engaging in task activities that threaten to reduce their existing pleasant

feelings (e.g., Hirt, Devers, & McCrea, 2008; Wegener & Petty, 1994). For group members who

perceive low individual-focused TFL behavior, the problem-free signal flowing from their positive feelings may lead them to shy away from more risky, creative work paths for the sake of maintaining their positive affect.

Activating negative affect also signals a sense of insufficiency (George & Zhou, 2002; To et al., 2012). We propose in this regard that individual-focused TFL facilitates subordinates to take greater advantage of their activating negative affect via persistence (Binnewies & Wörnlein, 2011; De Dreu et al., 2008). Thus, to demonstrate individual-focused TFL, leaders may spend more time developing certain subordinates through personal coaching and developmental feedback, emotional support, and mental challenge (Tse & Chiu, 2014; Wang & Howell, 2010; Wu et al., 2010). In response to the problem signal (and consequent arousal of an activating negative affect), empowered subordinates are more likely to stay focused on task, and to tackle challenges by looking for higher-quality solutions and more original, insightful ideas (De Dreu et al., 2008; George & Zhou, 2007; To et al., 2012).

In contrast, activating negative affect for individuals perceiving low individual-focused TFL might be more likely to result in threat instead of challenge appraisal, priming a more rigid response rather than a creative one (Seo et al., 2004). In this case, when individual-focused TFL is not present, negative feelings such as frustration and anger are more likely to produce cognitive demands that interfere with concurrent performance episodes (Beal et al., 2005). Considering this and the foregoing arguments, we therefore propose:

Proposition 1:   Irrespective of affective valence, while experiencing an activating affective

state: (a) followers perceiving high individual-focused TFL are more likely to

engage in creative process behavior, and (b) followers perceiving low

individual-focused TFL are more likely to withdraw from creative process

behavior.

The Moderating Role of Individual-Focused TFL at the Interpersonal (Dyadic) Level

Turning now to consider the dyadic level, we note that individual-focused TFL leadership can be regarded as a source of social comparison that influences how two coworkers interact with each other in a dyad (Festinger, 1954). This represents what Tse, Lam, Lawrence, and Huang, (2013, p. 975) refer to as a "balanced triadic relationship," which occurs when Coworkers A and B have a similar relational quality with their supervisor (Heider, 1958). In such a triadic relationship, the two coworkers tend to experience more favorable sentiments and interactions with each other. The triadic relational balance should in turn activate a shared schema of both coworkers that helps increase their levels of relational identification (Aron, Aron, Tudor, & Nelson, 1991; Shah, 2003). By the same token, two coworkers experiencing relational imbalance with their leader (i.e., Coworkers A and B have a differential quality of relationship with their supervisor) are more likely to develop less favorable mutual interactions.

Against this theoretical backdrop, we propose that individual-focused TFL is a critical boundary condition that shapes the affect-creative process relationship in different coworker dyads. When a leader demonstrates high individual-focused TFL, Coworkers A and B who receive *differentiated* treatments are likely to believe that their relational balance is undermined. Both coworkers therefore become more concerned about their own relative standing and subsequently focus on what resources, benefits, and support the other coworker receives from the leader as compared to herself (Vidyarthi, Liden, Anand, Erdogan, & Ghosh, 2010).

Consequently, with saliency of social comparison in mind, Coworkers A and B may become sensitized to interpersonal tensions and the negative affect associated with the difference of their status in the eyes of their supervisor. The resulting activating negative affect (e.g.,

emotional states such as envy and/or anger) they experience as a consequence may be interpreted an interpersonal threat that can then shift attention to off-task activities (Beal et al., 2005; Edmondson, 1999). This could lead in turn to more rumination surrounding the negative events and thus provoke even more negative affect (Beal et al., 2005). These negative experiences can then accumulate and affect both coworkers' emotional and behavioral reactions toward each other (Fisher, 2000), resulting in a more hostile attribution of each other's intentions in the dyad. As a result, rather than exchanging new ideas and sharing useful feedback, the coworkers might instead begin to engage in counterproductive behavior by undermining each other's attempts to engage in creative processes.

Conversely, when perceptions of individual-focused TFL are low, Coworkers A and B might come to believe that their relational balance is strengthened because their leader displays similar individualized consideration and intellectual stimulation behaviors towards them. Thus, both coworkers are likely to feel that their leader does not seek to create a differentiated relationship quality in the team. They may therefore pay less attention to evaluating each other's relative standing (Tse et al., 2013). This relational balance may then serve to increase their mutual trust and interpersonal liking (Sherony & Green, 2002), thereby buffering the negative impacts of experiencing interpersonal activating negative affect. Thus, we next propose:

Proposition 2:   When both followers in a dyad are experiencing an interpersonal activating negative affective state, coworkers in a dyad perceiving *differentiated* individual-focused TFL are less likely than coworkers in a dyad perceiving *undifferentiated* individual-focused TFL to engage in mutual creative process behavior.

The Moderating Role of Group-Focused TFL at the Team Level

Our next proposition is based in the notion that group-focused TFL behaviors (i.e., idealized influence and inspirational motivation) encourage team members to direct creative processes the cognitive resources and energy supplied by *either* activating positive *or* negative group affective tone into their team. A leader's idealized influence can motivate followers to challenge their *status quo* and to look forward to better possibilities for their team's future (Wu et al. 2010). Inspirational motivation can instill a sense of pride in team members through, for example, acting as a role model, using verbal persuasion and symbols to build morale; or by increasing the intrinsic valence of team goals (Bass, 1985). Research evidence (see Wang & Howell, 2010; Wu et al., 2010) supports the notion that group-focused TFL behaviors reinforce a team's shared vision, collective identity, and team efficacy for goal achievement. These facilitative leadership behaviors are in turn likely to instill an overarching vision for a team's continuous learning, adaptation, and reflection (West, 2000).

When leaders demonstrate group-focused TFL, team members sharing an activating positive group affective tone (e.g., excitement) may be more motivated to voice their new ideas (flowing from their broadened minds; see Grawitch, Munz, Elliott, & Mathis, 2003; Grawitch, Munz, & Kramer, 2003). Fellow team members might also become more motivated to follow through on suggestions, to exchange information, and to explore additional possibilities (Tsai et al., 2012).

When idealized influence and inspirational motivation are lacking, however, team members are less likely to develop a collective sense of ongoing improvement and learning. In this case, a sense of sufficiency of a team's status quo (elicited by a positive group affective tone) has the potential to encourage the team to follow an existing path rather than to seek out new (but

risky) approaches (Schwarz & Clore, 2003). As such, the homogenous positive affect (that might be experienced collectively in a team when group-focused TFL) is absent. This in turn should lead to a group-centrism syndrome where the group focuses on uniformity rather than searching for new ideas (Kruglanski, Pierro, Mannetti, & De Grada, 2006), and thus acts to prevent team members from engaging in creative process behavior (George & King, 2007).

In contrast, activating negative group affect (i.e., that transmits a problematic situation) may prompt team members to worker harder to look for a creative solution (e.g., Jones & Kelly, 2009; Kelly & Spoor, 2007). We argue in particular that the creative benefits of activating negative group affective tone are more salient with the presence of a TFL leader's idealized influence and inspirational motivation. These group-focused TFL behaviors thus not only inspire members to overcome or approach challenges by a sense of team potency, but also unify team members via strong team identification (Wang & Howell, 2010; Wu et al., 2010). Moreover, through experiencing a negative group affective tone, inspired team members who believe in their collective effectiveness are likely to persist longer and to stay focused on the task. They might for example engage in more thorough problem framing, exchange task-relevant information, trial alternative solutions, or engage in a prolonged search for higher-quality solutions (Jones & Kelly, 2009).

In a negatively aroused group without the presence of group-focused TFL, however, members may be tempted to settle on a premature solution. Moreover, without the facilitative TFL behaviors that unify team members and preserve group integrity, a team may be less effective in reaching consensuses during disputes (Bezrukova, Jehn, Zanutto, & Thatcher, 2009; Haslam & Ellemers, 2005). Team members may therefore seek to serve their own interests and values rather than to act with the group's best interests in mind (Van Knippenberg, 2000).

Consequently, the interpersonal issues, biases, or even hostility surrounding the activating negative affective experience are likely to be intensified in such a team. Team creative processes which require task-focused, constructive collaboration are therefore likely to be hindered. Hence, we propose:

Proposition 3:   Irrespective of affective valence, group members sharing an activating affective state collectively are likely to: (a) engage in creative processes when group-focused TFL is high, and (b) to withdraw from creative processes when group-focused TFL is low.

Discussion

The model we present in this article should be viewed as a tool to explicate the multi-level nature of the relationship between affect and creative processes in work teams. In particular, we draw upon the Ashkanasy's (2003) multilevel framework and the Wu et al.'s (2010) dual-level model of TFL to develop a model of how individual- and group-focused TFL can affect relationships between affect and creative process behavior. The model includes three levels of conceptualization and integrates literatures of affect, creativity, and TFL. At the within-person level, we investigate how affective states may influence a follower's fluctuation of creative process over time. Similarly, at the dyadic level, we argue that interpersonal affect between a pair of followers (i.e., a dyad) can influence their combined creative process; moreover, at the team level, collective affective experience (i.e., affective tone) can influence group creative behaviors. Furthermore, we theorize that group-focused TFL underlies the relationship between affective tone and collective creative process behavior at the team level, while individual-focused TFL behaviors moderate the relationship between affect and creative processes at both within-person and interpersonal levels.

Implications for Theory and Practice

We believe our model has potential to make four key contributions to theory concerning the role on affect, creativity, and TFL in organizations. We also believe our theorizing carries important implications for management practice

Our first contribution to theory arises in response to calls by Ashkanasy (2003), George and Zhou (2007), and Zhou and Hoever (2014) for researchers to consider affect and creativity at multiple levels of conceptualization. In particular, we endeavored to integrate existing research on affect and creativity at three levels (within-person, interpersonal, and group). As such, we argue that both affect and creative process are inherently multilevel and cross-level concepts. Moreover, we suggest that it is imperative to explore how the affect-creative process relationship can coexist at each of the three levels simultaneously.

The second theoretical contribution is in answer to Gooty and colleagues' (2010) call to examine the influence of TFL on followers' affective experience leading to work outcomes. Drawing on a growing body of research (see Rajah et al., 2011 for a review; George & Zhou, 2007), we take a novel perspective and propose mechanisms whereby the dual levels of TFL (i.e., combined both group-focused and individual-focused TFL behaviors) can serve as contextual facilitators to encourage followers to translate their (positive or negative) affect into creative process behavior. More specifically, we argue that existing research has largely emphasized the overall conceptualization of TFL but has tended to forget that some TFL behaviors are directed toward individual followers while other behaviors are directed toward the group as a whole (i.e., the dual-level model of TFL; Tse & Chiu, 2014; Wang & Howell, 2010; Wu et al., 2010). In particular, our theorizing suggests that affect and creative processes are multilevel in nature, and moreover that their relationship can be different depending on the level of conceptualization and

the type (viz., group- vs. individual-focused) of TFL.

The third contribution to theory comes about because, in contrast to past research that has focused on examining the direct effect of the dual-level model of TFL on specific outcomes at different organizational levels, our theory suggests that both group-focused and individual-focused TFL serve as contextual variables (Tse & Chiu, 2014; Wang & Howell, 2010; Wu et al., 2010). Furthermore, and building upon this context-specific view, we theorize that both individual- and group-focused TFL behaviors are critical boundary conditions that moderate the relationships between affect and creative processes across levels.

Our fourth and final contribution is that, by synthesizing across leadership, affect, and creativity literatures, we offer an integrated multilevel framework to explain the complexity surrounding the relationship among the proposed variables at multiple levels in work teams. Researchers such as Dionne et al. (2014), Yammarino and Dansereau (2011), and Yammarino, Dionne, Chun, and Dansereau (2005) have suggested that the level issue has been neglected, leading to a misalignment between level of theory and conceptualization in TFL research. Although the theoretical importance of TFL has been made explicit in the literature, a large body of this research has so far failed to conceptualize its effects correctly (Dionne et al., 2014; Yammarino et al., 2002).The model we propose serves to illustrate in particular how individual- and group-focused TFL behaviors align with specific levels of affect and creativity, including relationships at within-person, interpersonal and team levels of conceptualization (Gooty et al., 2010; Gooty, Gavin, & Ashkanasy, 2009).

In terms of contributions to management practice, we argue that, because of the multilevel nature of the variables in our model, leaders need to be aware that their TFL behaviors may not always result in creative outcomes across different levels in their organization. Thus

leaders need to be more sensitive, flexible, and proactive in adjusting their individual-focused vs group-focused TFL based on the particular environment they are in (see Tse & Chiu 2014; Wu et al., 2010). For example, and as we suggest in Figure 1, individual-focused TFL behaviors on the one hand are more likely to influence relationships between affect and creative processes at within-person and interpersonal levels rather than at the group level. On the other hand, group-focused TFL is likely to be more effective than individual-focused TFL when the focus is to be on relationship between group affective tone and team creative processes.

Our model makes it clear that leaders who exhibit a combination of individual- and group-focused TFL are more likely to stimulate followers' affect for creative processes across levels. In this regard, we recommend that future empirical investigations based in our model might have potential to help to develop specific training programs designed to promote the practical implications of the dual model of transformational leadership for specific outcomes across levels in the organization.

Limitations and Future Research Directions

We recognize that our theory and proposed model are not all-encompassing. We acknowledge in particular that we based our arguments on only three (within-person, interpersonal and team) of the five levels in the Ashkanasy (2003) framework of emotion. Thus, potential variables relating to the unspecified levels – individual (Level 2) and organizational (Level 5) – in Ashkanasy's framework may influence the relationships proposed in the model. For example, individual difference variables such as positive affectivity and negative affectivity (see Watson et al., 1988) at Level 2 may relate to affect in our model across the levels that have not been addressed. Additionally, organization-wide policies or organizational culture (at Level 5) has potential influence the affect-creativity relationship, and to confound the moderating effect

of the dual-level model of TFL on the relationship at the lower levels (Ashkanasy & Härtel, 2014). While these individual-level and organizational-level variables are important, they nonetheless lie outside the scope of our theorizing, which focuses specifically on affect and creativity for parsimony.

It should be emphasized that, while empirical evidence exists for parts of the model we propose in Figure 1, as yet no integrated, multi-level research has been conducted to test this model as a whole. In view of the existence today of sophisticated multi-level modeling techniques able to analyze meditation and moderation effects at three levels (e.g., see Preacher, 2011; Preacher, Rucker, & Hayes, 2007), however, there clearly exists an opportunity to develop an empirical test of the ideas we outline in this article.

In terms of future research ideas, we note that affective states can be represented by a number of appraisal dimensions apart from valence and activation. As indicated by Baas et al., (2008), one interesting candidate is regulatory focus, whereby promotion-associated affective states such as sadness and anger are more likely than prevention-associated states (e.g., emotions of calm and disgust) to promote creativity. If the regulatory focus perspective holds, for example, sadness (a deactivating but promotion-related affective state) might be, in a way, beneficial to creative activities via increased rumination (Verhaeghen, Joormann, & Khan, 2005). This novel idea might qualify the conventional understanding that rumination is largely intrusive to ongoing performance (see Beal et al., 2005 for a review).

Anger is another promotion-associated affect that warrants more research attention. Van Kleef, Anastasopolulou, and Nijstad (2010) found laboratory evidence that anger as social information can either promote or inhibit idea generation, subject to individuals' epistemic motivation to understand their situation. In another laboratory study, Gaddis, Connelly, and

Mumford (2004) found that followers' perceptions in response to their leaders' anger and negative affect depend on a team's promotion versus prevention goal orientation. Consistent with this context-specific view, To et al. (in press) found in a recent field study that angst such as anger can be "unleashed" as energy for greater creative process engagement, but only for individuals with high trait learning goal orientation coupled with high psychological empowerment.

Some interesting future research directions can be derived from this emerging evidence. For example, researchers may wish to explore how leaders' or co-workers' display of anger may induce a symmetric (i.e., anger) or asymmetric feeling (e.g., fear) among focal subordinates or peers, which may in turn influence creativity within teams. It might also be interesting to explore further the boundary conditions (such as the leader's characteristics, the subordinates' characteristics, or possibly the complementary between their characteristics) may help to channel the promotion- or prevention-associated states beneficial to creative performance.

As stressed by Baas and his colleagues (2008), associating affective states with a "specific regulatory focus is a relatively new development in the literature … and direct evidence for such associations is still missing" (p.797). While our research framework is built upon the more established affective dimensions of valence and activation, inclusion of regulatory focus as an additional dimension might help to improve understanding of the affect-creativity nexus by teasing out the differentiated effects of specific or discrete affective states, such as anger, fear, and sadness, on creativity.

Our multilevel framework also sheds lights on another unresolved question in the leadership literature: If there are tradeoffs between leading a group and leading individuals, should leaders focus on developing individual followers or the whole team? This issue is

particularly relevant to the leadership-affect-creativity nexus proposed in our model because of

the potential contradictory effects associated with the individual-level focused and group-

focused TFL behaviors.

If our propositions are correct, leaders who focus more on individuals would motivate

such star performers to take greater personal initiative for creative striving during uplifts and

hassles. Fundamental to the dilemma, however, are the reactions of the fellow members: Will

they look upon star performers as role models for inspiration? Or will they engage in

withdrawal behavior because of differentiated treatments by their leader? Individual-focused

TFL behaviors can lead to divergence in followers' appraisal of affective events (e.g., challenge

versus threat) and such opposing tendency can dampen the creative collaboration between the

members. Leaders who want to practice individual-focused TFL behaviors should bear this

potential drawback in mind, and evaluate how salient it will be in consideration of their

environmental factors (Wu et al., 2010). For instance, a work setting featuring high procedural

justice may play a buffering role (Lind & Tyler, 1988). While the procedures of decision

making are fair, transparent, consistent, and reliable, members may become desensitized to the

unequal treatment associated with differentiated leadership. The creative star performers may

feel more secure as their contributions and credits are recognized fairly; while fellow members

may view the privilege accruing to these high performers as more justifiable. This may preclude

the perception of favoritism and mistreatment by the leader, preventing the occurrence of

negative affective responses that might shift attention to off-task or counterproductive activities.

Another possible consideration for leaders to resolve the dilemma between individual-

focused and group-focused leadership may be goal interdependency of a team (Stapel & Koomen,

2005). Coworkers who feel that they are interdependent for survival or advancement may be

more willing just to voice concerns rather than to reserve the best idea for themselves. Perceiving that they 'sink or swim together,' coworkers may therefore rely less on social comparison cues and the associated feelings to guide their interpersonal behaviors. In a highly interdependent team, leadership behaviors such as intellectual stimulation may not only operate at the individual level but also at the group level. In practice, a leader can develop a mission (based on the characteristics of intellectual stimulation) and communicate the vision to the group as a whole. The resulting intellectually stimulating team norm can then act to motivate all members within the group to tackle unsolved problems from different perspectives and to think of new and creative solutions. Therefore, team members may be better able to translate their positive and negative affective experiences into team creativity. We suggest that future research would do well to consider examining whether intellectual stimulation can operate at more than one level of analysis and, if so, when and how it operates more strongly at one level than the other.

Finally, we note that, while leaders who advocate group-focused TFL behaviors can help their teams to thrive and to be creative while experiencing an affective event, they ignore, at their peril, the propensity for a strong team identity produced by group-focused TFL behaviors to promote conformity pressure, thereby reducing opportunities for creativity sparked by meaningful divergence and individuality (Farh, Lee, & Farh, 2010; Janssen & Huang, 2008). Research by De Dreu and West (2001), for example, suggests in this regard that minority dissent can stimulate team creativity and innovation when teams have a high level of participation in decision making. Leaders may therefore use group-focused TFL behaviors to encourage a participative climate for team discussion together with the intervention tactics, such as taking a Devil's advocate role or using a nominal group technique.

In such a setting, for example, team members may feel more freedom to express unique ideas flowing from their positive feelings and broadened mind, without a concern about damaging an existing pleasant group affective tone. On the other hand, individuals experiencing a negative affect, who are tuned to be more cautious, may feel more legitimate and obligated to voice out their concerns when they have an active role in decision making. This in turn may legitimize the full expression by team members of their different information processing styles associated with their different or even mixed feelings, leading to a real synergy for team creativity (e.g., Barsade & Knight, 2015). Further research is needed to study how leaders can balance cohesion and individuality in a team, which may in turn produce an optimal setting for team members to take greatest advantage from their affective resources for team creativity.

Conclusion

In this review, we sought to inform the current literature on the interactive effects of affect, creativity and transformational leadership by taking a multilevel perspective. Our proposed model suggests that the dual-level model of TFL (i.e., group- and individual-focused TFL behaviors) can simultaneously exert differential effects on the affect-creativity relationship across levels. We envisage that our proposed model will stimulate interest and attention to role of leadership in affect-creativity relationship in future efforts.

Moreover, synthesizing the leadership, affect, and creativity literatures, we offer an integrated multilevel framework to explain the complexity surrounding the relationship among the proposed variables at multiple levels in work teams. As such, we respond to calls by Dionne et al., (2014), Yammarino and Dansereau, (2011), and Yammarino et al. (2005) for multilevel modeling to be taken more seriously in the organizational behavior and leadership literature. To tackle this problem, the model we propose serves to illustrate how the dual levels of TFL can

align with the level of specification about the nature of affect and creativity, and their

relationship operating at within-person, interpersonal, and group levels.

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Figure 1: A multilevel model of transformational leadership, affect and creative processes in work teams

Cross Level	**Individual-focused Transformational Leadership**	**Group-focused Transformational Leadership**

Group Level	**Group affective tone**	P3	**Team creative processes**

Interpersonal Level	**Affect toward co-workers**	P2	**Interpersonal creative processes**

Within-person Level	**State affect of a member**	P1	**Within-person creative processes**