



Transformational leadership climate: Performance linkages, mechanisms, and boundary conditions at the organizational level

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ABSTRACT

Transformational leadership (TFL) climate describes the degree to which leaders throughout an organization engage in TFL behaviors. In this study, we investigate performance linkages, mechanisms, and boundary conditions of TFL climate at the organizational level of analysis. In a sample of 158 independent organizations, 18,094 employees provided data on TFL climate, positive affective climate, trust climate, and employees' task performance behavior and organizational citizenship behavior. In addition, human resource managers rated overall employee productivity. Study results yielded a pattern of moderated mediation for overall employee productivity and employees' aggregate task performance behavior, in that an organization's TFL climate was indirectly (through positive affective climate) related with these outcome variables under conditions of high trust climate, but not under conditions of low trust climate. Further, we found an organization's TFL climate to indirectly relate with employees' aggregate organizational citizenship behavior through positive affective climate, largely independent of the level of trust climate.

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Leaders are particularly effective if they engage in transformational leadership (TFL) behaviors, such as articulating a captivating vision for the future, acting as charismatic role models, fostering the acceptance of common goals, setting high performance expectations, and providing individualized support and intellectual stimulation for followers (Bass, 1985; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Many studies show that these TFL behaviors inspire high levels of performance in followers (Judge & Piccolo, 2004; Lowe & Kroeck, 1996; Podsakoff et al., 1990; Wang, Law, Hackett, Wang, & Chen, 2005). Nevertheless, although these studies have added greatly to knowledge about effective leadership, they have almost exclusively focused on individual leaders and their interaction with followers. In organizations, however, leaders rarely act in isolation; instead, leaders work together with other leaders, and there are many leaders throughout the hierarchy. In addition, employees are not only exposed to their individual leader, but also see and interact with other leaders throughout the organization. Does it matter for an organization as a whole, then, whether leaders *throughout the organization* similarly engage in TFL behaviors?

The degree to which different leaders in an organization direct similar behaviors toward their subordinates is captured in the concept of *leadership climate* (e.g., Bliese & Halverson, 1998; Chen & Bliese, 2002; Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Gavin & Hofmann, 2002). Walter and Bruch (2010) extended this concept to TFL, suggesting that a TFL climate emerges when employees throughout the organization perceive their direct leaders as engaging in the behaviors associated with TFL. Research on this type of leadership climate is only in its beginnings, though. It remains an open question whether TFL climate holds benefits for

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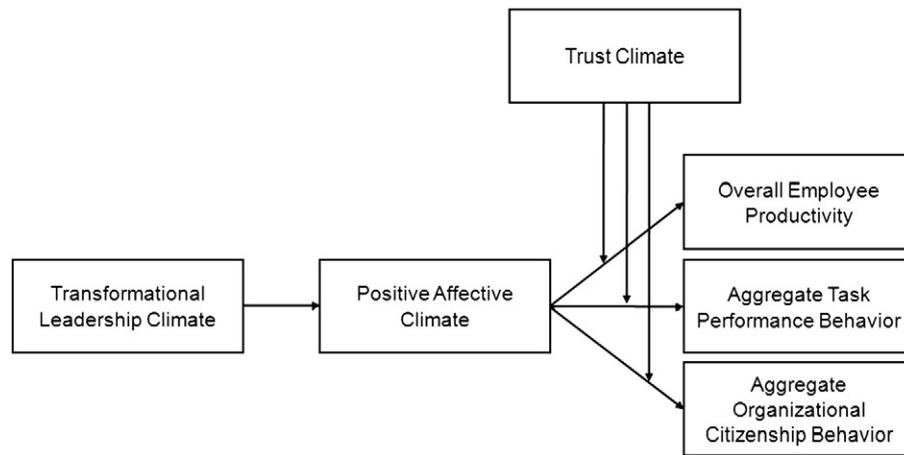


Fig. 1. The moderated mediation model.

the organization as a whole. Also, the mechanisms that may link TFL climate to such benefits and the boundary conditions for these mechanisms have not been examined to date. Thus, further research is necessary to obtain a better understanding of the performance linkages, the mechanisms, and the boundary conditions of TFL climate.

In this study, we address these research gaps by developing and empirically testing a model of the functioning of TFL climate at the organizational level. Our model links TFL climate with workforce performance – the extent to which the workforce, as a whole, is productive and engages in performance-relevant behaviors (Scullen, Bergey, & Aiman-Smith, 2005; Shaw, Gupta, & Delery, 2005). Specifically, we consider three aspects of workforce performance: overall employee productivity, aggregate employee task performance behavior, and aggregate employee organizational citizenship behavior. We therefore view performance as a *behavior*, rather than an *outcome*, which suggests that “performance is in the doing, not in the result of what has been done” (Beal, Cohen, Burke, & McLendon, 2003, p. 990).

Furthermore, we propose that TFL climate is linked to workforce performance through the organization's positive affective climate. Building on affective events theory (Weiss & Cropanzano, 1996), we suggest leaders' TFL behaviors are positively associated with followers' positive feelings. Research at lower levels of analysis has demonstrated this relationship (Bono, Foldes, Vinson, & Muros, 2007), with followers' positive feelings mediating TFL–performance linkages both at the individual (McColl-Kennedy & Anderson, 2002) and team levels (Pirola-Merlo, Härtel, Mann, & Hirst, 2002). To the extent that leaders in an organization homogeneously engage in pronounced TFL behaviors (i.e., the organization's TFL climate is high), employees throughout the organization should experience such leadership as a positive work event (Ashkanasy & Jordan, 2008; Weiss & Cropanzano, 1996). In response, an organization-wide positive affective climate (i.e., the shared experience of positive affect within an organization; cf. Dasborough, Ashkanasy, Tee, & Tse, 2009; Gamero, González-Romá, & Peiró, 2008) may emerge and, following broaden-and-build theory (Fredrickson, 1998, 2003), may facilitate employees' performance.

Finally, Shamir and Howell (1999) have noted that the effectiveness of TFL may depend on an organizational culture characterized by mutual trust, candid communication, and integrity. In line with research suggesting that trust represents an important moderating factor for performance relations in organizations (e.g., Dirks & Ferrin, 2001), we examine Shamir and Howell's notion in the present article. Hence, we cast an organization's trust climate (i.e., the positive expectations employees have about the intent and behaviors of other organizational members; Huff & Kelley, 2003) as a boundary condition under which the potential relationship between TFL climate and workforce performance (as mediated through organization's positive affective climate) unfolds.

It is important to emphasize that our study investigates performance linkages, mechanisms, and boundary conditions of TFL climate at the *organizational level of analysis*. In contrast, most previous studies of TFL were located at the individual or team level. McColl-Kennedy and Anderson (2002), for example, showed that individual leaders' transformational behaviors indirectly shape followers' performance, through follower's emotions. Our line of reasoning, however, suggests that *beyond* individual-level differences in such variables, there is comparatively more variability in TFL, positive affect, trust, and workforce performance between organizations than within organizations. Our study addresses these *between-organization* differences, advancing a new, broader perspective on the potential consequences of TFL.

Altogether, we propose an organizational-level moderated mediation model, in that an organization's TFL climate is suggested to indirectly associate with workforce performance (viz., overall employee productivity, aggregate task performance behavior, and aggregate organizational citizenship behavior), through positive affective climate, with the strength of these indirect linkages hinging on the organization's trust climate (see Fig. 1).⁴ By examining this model in a sample of 158 independent organizations, we hope to contribute to a better understanding of the functioning of TFL climate and identify reasons why some organizations may benefit from TFL climate to a greater extent than others.

⁴ We note that besides the linkages presented in Fig. 1, alternative models are conceivable. We ask the reader to refer to the Results section for post-hoc empirical examinations of such models.

TFL climate as an organization-level construct

In line with prior work (Walter & Bruch, 2010), we conceptualize TFL climate as an organizational-level construct, indicating the extent to which leaders throughout an organization direct TFL behaviors towards their immediate followers. TFL climate originates from the individual level of analysis but manifests at the organizational level through various mechanisms that contribute to the similarity of individuals' leadership behaviors within organizations (and followers' perceptions thereof; Conger & Kanungo, 1987) and to the variability of such behaviors between organizations (Klein, Dansereau, & Hall, 1994). These mechanisms include processes of attraction–selection–attrition and newcomer socialization (Schneider, 1987; Schneider & Reichers, 1983), as well as common experiences and mutual interactions among an organization's employees (Kozlowski & Hatstrup, 1992; Morgeson & Hofmann, 1999). Accordingly, scholars have found considerable similarity in leaders' TFL behaviors within organizations, both among peers (Bommer, Rubin, & Baldwin, 2004) and among focal leaders and their direct superiors (Bass, Waldman, Avolio, & Bebb, 1987). In line with James and colleagues' perspective on organizational climate (e.g., James, 1982; James et al., 2008), we therefore treat TFL climate as a shared property of an organization (Klein & Kozlowski, 2000) that reflects the shared perception of followers throughout the organization that their direct leaders engage in TFL behaviors.

Hypotheses development

TFL climate and organizations' positive affective climate

An organization's positive affective climate emerges from individuals' positive feelings through mechanisms of emotional contagion and affective sharing (Barsade, 2002; Walter & Bruch, 2008) and through socialization processes that transfer an organization's feeling rules among employees (Ashforth & Humphrey, 1993). Although most previous research has investigated affective climate at the group level (e.g., George, 1996; Pirola-Merlo et al., 2002), scholars have recently pointed out that the respective mechanisms extend to the organizational level (Ashkanasy & Ashton-James, 2007). For example, Hareli and Rafaeli (2008) claim that “mimicking, emotion interpretation, etc. are interpersonal, but may be the foundations of the evolution of an ‘affective climate’ in groups or organizations” (p. 38). Ashkanasy (2003a, 2003b; see also Ashkanasy & Humphrey, 2011; Ashkanasy & Jordan, 2008) has, accordingly, put forth a multilevel model of emotions in organizations that entails “emotional climates” as organizational-level descriptions of palpably sensed, shared feelings among employees.

We argue that TFL climate will positively associate with an organization's positive affective climate. Scholars have, accordingly, emphasized the inherently affective qualities of TFL, claiming that leaders' respective behavior entails an “intense emotional component” (Bass, 1985, p. 36) that distinguishes such leadership from other leadership styles (e.g., transactional leadership; Ashforth & Humphrey, 1995; Ashkanasy & Tse, 2000). In line with Weiss and Cropanzano's (1996) affective events theory, leaders' TFL behaviors may constitute important affective events that enhance followers' positive feelings, as TFL has been argued to be particularly suitable to “engage followers emotionally” (Ashkanasy & Tse, 2000, p. 226) and to meet followers' emotional needs (Bass, 1985). By articulating a captivating vision for the future and acting as charismatic role models, for example, transformational leaders may elicit feelings of optimism, elation, and cheerfulness in followers (McCull-Kennedy & Anderson, 2002). Such leadership behaviors may serve to “deemphasize narrow self-interests and rationality” and “increase the intrinsic value of goal accomplishment”, evoking followers' positive emotions and harnessing them for the pursuit of common goals (Ashforth & Humphrey, 1995, p. 116). In addition, transformational leaders' individualized consideration may promote contentment and satisfaction in followers, as the leader demonstrates respect and support toward followers (Podsakoff et al., 1990). Notably, transformational leaders have been suggested to actively shape and adjust their emotional expressions to directly influence the emotions of followers (Humphrey, 2002). They are thereby “leading with emotional labor,” attuning their emotional expressions to the needs of followers and embracing emotional displays as a channel through which to convey their message (Humphrey, 2008; Humphrey, Pollack, & Hawver, 2008; see also Newcombe & Ashkanasy, 2002). Corroborating this line of reasoning, scholars have demonstrated positive linkages between TFL and followers' positive affective reactions both at the individual level (Bono et al., 2007; McCull-Kennedy & Anderson, 2002) and at the group level (Pirola-Merlo et al., 2002).

Along with other scholars (e.g., Ashkanasy & Jordan, 2008), we expect a similar relationship at the organizational level of analysis. The more leaders throughout the organization engage in pronounced TFL behaviors and thereby strengthen the organization's TFL climate, the more employees in the entire organization encounter positive work events based on this leadership (Weiss & Cropanzano, 1996). Thus, an organization's TFL climate should constitute an ambient stimulus (Hackman, 1992) that evokes similarly positive moods and emotions in all employees within an organization and, thereby, contributes to the respective organization's positive affective climate.

Hypothesis 1. Organizations' TFL climate is positively associated with organizations' positive affective climate.

Organizations' positive affective climate and workforce performance

We further suggest an organization's positive affective climate is positively associated with workforce performance (Scullen et al., 2005; Shaw et al., 2005). As indicated earlier, we focus on three aspects of workforce performance: (a) overall employee productivity, (b) aggregate employee task performance behavior, and (c) aggregate employee organizational citizenship behavior. We conceptualize all three aspects of work performance at the organizational level. First, overall employee productivity refers to

the extent to which employees efficiently create output (Guthrie, 2001); this construct is among the most frequently used organizational-level outcome variables in research on human resource management (Boselie, Dietz, & Boon, 2006). Second, employees' task performance behavior and organizational citizenship behavior have been investigated at multiple levels, from the individual to the organizational level (e.g., Schnake & Dumler, 2003). Task performance behavior describes whether employees effectively invest time and effort into task accomplishment (Borman & Motowidlo, 1997), and organizational citizenship behavior reflects employees' contributions to the social or psychological environment in which work is performed (Lee & Allen, 2002). Although task performance behavior and organizational citizenship behavior may vary from individual to individual (as does productivity; see e.g., Grant, 2008), with some being more capable, motivated, and helpful than others (Motowidlo & van Scotter, 1994; Rotundo & Sackett, 2002), we believe that there are good reasons to suggest that task performance behavior, organizational citizenship behavior, and employee productivity vary less within organizations than between organizations.

Employees throughout an organization are likely to display similar levels of task performance behavior, organizational citizenship behavior, and overall productivity due to interdependence, social interactions, and common experiences inside organizations. Social comparison theory and social learning theory suggest that individuals observe others' behaviors to understand and define the behaviors that they should exhibit themselves (Bandura, 1986; Festinger, 1954; Kruglanski & Mayseless, 1990). Empirical studies have, accordingly, shown that the hours employees spend at work impact the amount of time their colleagues spend working (Brett & Stroh, 2003; Eastman, 1998), that the frequency of group member absenteeism is related to individual employee absenteeism (Mathieu & Kohler, 1990), and that group members' tardiness impacts the probability for individual tardiness (Eder & Eisenberger, 2008). These studies suggest that "perceiving another person's behavior creates a tendency to behave similarly oneself" (Chartrand & Bargh, 1999, p. 893). An individual's performance-related behavior is thus likely to affect the degree to which others in his or her social environment engage in similar types of behavior. Consequently, "individual performance aggregates to affect work unit and, eventually, organizational performance" (Chen et al., 2007, p. 334).

Following previous research that utilized employees' performance-relevant behaviors at various levels of analysis, including the organizational level (e.g., Schnake & Dumler, 2003), we therefore cast employees' task performance behavior, organizational citizenship behavior, and overall productivity as aggregate, organizational-level constructs to capture the extent to which employees throughout the organization collectively engage in the respective actions (Scullen et al., 2005). As Organ (1988) noted, such aggregates of employees' performance are often more relevant for organizational effectiveness than individual-level performance (see also Ostroff, 1993; Ployhart, 2004). For example, a solitary underperforming employee is unlikely to do much damage to the organization as whole. If most employees performed poorly, however, this could severely harm the organization's output (Schnake & Dumler, 2003).

Theoretically, the link between positive affective climate and workforce performance builds on the notion that positive emotions broaden people's thought-action repertoires and build their enduring personal resources (broaden-and-build theory; Fredrickson, 1998; 2003), eventually enabling them to achieve higher performance levels. Research has, accordingly, demonstrated positive affect to enhance task performance behavior and organizational citizenship behavior both at the individual (Kaplan, Bradley, Luchman, & Haynes, 2009; Tsai, Chen, & Liu, 2007) and at the group level (George, 1996; Grawitch, Munz, & Kramer, 2003). Transferring these findings to the organizational level of analysis, "broaden-and-build theory predicts that positive emotions in organizational settings not only produce individuals who function at higher levels, but may also produce organizations that function at higher levels" (Fredrickson, 2003, p. 174).

Specifically, with respect to overall employee productivity and aggregate task performance behaviors, habitual modes of thinking should be broadened and task-relevant resources nurtured across organization members if employees collectively experience high levels of positive affect at work (i.e., positive affective climate is high). Then, employees throughout the organization should be able to approach work tasks more efficiently, in a more flexible, more creative and innovative, and more enduring manner and, by consequence, exhibit higher levels of overall employee productivity and aggregate task performance behavior (Martin, 2004; Seo, Feldman Barrett, & Bartunek, 2004; Tsai et al., 2007; Wilderom, 2011). Similarly, with regard to aggregate organizational citizenship behavior, the positive feelings organization members experience concurrently should contribute to their openness, helpfulness, and cooperative behaviors (George, 1990; Isen & Baron, 1991), strengthening the willingness and ability of employees across the organization to support the social and psychological environment of work performance (Vacharkulksemsuk, Sekerka, & Fredrickson, 2011).

Hypothesis 2. Organizations' positive affective climate is positively associated with (a) overall employee productivity, (b) aggregate task performance behavior, and (c) aggregate organizational citizenship behavior.

The moderating role of organizations' trust climate

Organizations' trust climate may moderate the proposed positive affective climate–workforce performance linkages. According to Huff and Kelley (2003, p. 82), trust climate within an organization is "defined as the positive expectations that individuals have about the intent and behaviors of multiple organizational members based on organizational roles, relationships, experiences, and interdependences." Various previous studies have operationalized trust at higher levels of analysis, including the organizational level (e.g., Currall & Inkpen, 2002; Dasborough et al., 2009; Lau & Lam 2008; McEvily, Perrone, & Zaheer, 2003; Tse et al., 2008). In line with this reasoning, we cast trust climate as a shared property of an organization. Organizational structure and culture influence, constrain, and align employees' relational experiences (McEvily et al., 2003), so that employees develop a generalized

form of trust in their co-workers and the management (Dietz & Den Hartog, 2006), and a “collective felt trust” within an organization emerges (Deutsch Salomon & Robinson, 2008, p. 594).

We adopt Dirks and Ferrin's (2001) perspective that trust climate is an important organization-level moderator, with high-trust organizations providing a fruitful context for the role of positive affective climate. We therefore suggest the associations between an organization's positive affective climate and workforce performance to be more pronounced under conditions of high rather than low trust climate. Specifically, in high-trust settings, employees throughout the organization may be more willing to utilize the broadened thought-action repertoires and additional resources engendered through positive affective climate for efficient and effective task achievement (Vacharkulksemsuk et al., 2011). In such situations, employees should feel confident that they will be adequately rewarded for their performance-relevant behavior and that other organizational members will also contribute their fair share rather than free-riding and exploiting others' efforts (Jones & George, 1998). Hence, there are tangible benefits and little impediments to performance-relevant behavior in such contexts, strengthening the linkages between positive affective climate and both overall employee productivity and aggregate task performance behavior.

Similarly, we suggest a high level of trust climate will render employees more likely to act upon the helpful and cooperative tendencies triggered by the organization's positive affective climate (Fredrickson, 2003; George, 1996). Scholars have noted that positive feelings more strongly contribute to prosocial and helping behaviors if such behaviors serve to maintain or even enhance the respective feelings (e.g., Carlson, Charlin, & Miller, 1988; Isen & Baron, 1991). This should apply in high-trust settings, because employees throughout the organization expect others to reciprocate beneficial, cooperative behaviors in kind rather than taking advantage of such actions (Colquitt, Scott, & LePine, 2007; Williams, 2007). Hence, the positive affective climate–aggregate organizational citizenship behavior linkage should be more pronounced in this situation.

When trust climate is low, by contrast, overall employee productivity and aggregate task performance behavior are endangered because the organization's members question each others' intentions and waste time monitoring each others' actions (Rico, Sánchez-Manzanares, Gil, & Gibson, 2008). Under such conditions, the action tendencies, broadened attention, and increased resources triggered by positive affective climate (Fredrickson, 2003; George, 1996) are distracted from purposeful and efficient task pursuit. Similarly, the positive affective climate–aggregate organizational citizenship behavior linkage should be diminished in such settings, because employees will expect other organization members to exploit their helpful behavior and, therefore, are less likely to engage in this type of action even if positive affective climate is high (cf. Jones & George, 1998).

Hypothesis 3. Organizations' trust climate moderates the relationships between organizations' positive affective climate and (a) overall employee productivity, (b) aggregate task performance behavior, and (c) aggregate organizational citizenship behavior. These relationships will be stronger under conditions of high rather than low trust climate.

Taken together, the above considerations describe a model in which an organization's TFL climate is positively related to its positive affective climate (Hypothesis 1) that, in turn, is positively related to (a) overall employee productivity, (b) aggregate task performance behavior, and (c) aggregate organizational citizenship behavior (Hypothesis 2). These latter relationships, however, are suggested to hinge on the organization's trust climate (Hypothesis 3). In sum, these hypotheses specify a moderated mediation model (Preacher et al., 2007), in which TFL climate is positively and indirectly related to the three aspects of workforce performance, through positive affective climate, with this indirect linkage depending on the level of trust climate within the respective organization (see Fig. 1). Because we predict strong (weak) linkages between positive affective climate and overall employee productivity, aggregate task performance behavior, and aggregate organizational citizenship behavior when trust climate is high (low), we expect the following:

Hypothesis 4. Organizations' trust climate moderates the positive and indirect relationships between TFL climate and employees' (a) overall employee productivity, (b) aggregate task performance behavior, and (c) aggregate organizational citizenship behavior (through positive affective climate). Specifically, organizations' positive affective climate will mediate these relationships under conditions of high trust climate, but not under conditions of low trust climate.

Method

Data collection and sample description

The sample for the present research was drawn in cooperation with an agency located in Germany specializing in benchmarking small-to-medium sized enterprises. To take part in the study, organizations had to (a) occupy no more than 5000 employees and (b) be located in Germany. In return for their participation, each organization was promised a detailed technical benchmarking report. Following a marketing campaign mainly based on print advertisements and direct mailing, the agency initially recruited 189 organizations. Subsequently, 31 organizations failed to provide sufficient data or canceled their participation, resulting in an organizational level response rate of 84% ($n = 158$). Participating organizations were diverse in terms of industry affiliation, including services (53%), manufacturing (28%), trade (13%), and finance and insurance (6%), and varied in size from 16 to 3400 employees (median = 124). It should be noted that eliminating organizations with 20 or less employees ($n = 5$) and 1000 or more employees ($n = 8$) did not change the pattern of results, so all sample organizations were included in hypotheses testing.

Standardized procedures were applied across all organizations to improve comparability in the data collection process. We gathered data from several sources. First, we ran a key informant survey to obtain general information on the participating

organizations (including industry affiliation, organizations' size, etc.). This survey was completed by the organizations' human resource executives or another member of their top management teams. Second, we gauged employee survey data to capture TFL climate, positive affective climate, trust climate, and task performance behavior and organizational citizenship behavior. Participating organizations invited all employees with a standardized e-mail sent either by their human resource departments (if applicable) or through a top management team member's e-mail address. This e-mail provided a short description of the study's purpose and offered a link to a web-based survey hosted by an independent third company. In a few instances, participating organizations installed computer terminals to enable the participation of employees without own company e-mail address. Applying a split-sample design (Rousseau, 1985), we programmed an algorithm into the survey web site to randomly distribute participating employees to one out of four survey versions. That is, by collecting responses on TFL climate, positive affective climate, trust climate, and employee task performance behavior/organizational citizenship behavior each in a different version of the employee surveys, we avoided common source bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Finally, a second key informant survey (again completed by organizations' human resource executives or other top management team members), conducted about two weeks after the employee surveys, captured overall employee productivity.

All together, 18,094 employees voluntarily participated in this study (in addition to the top executives completing the key informant surveys). The average within-organization response rate in the employee surveys was 59% (*std. dev.* = 22%). The algorithm described above effectively distributed participating employees between the different versions of the survey, with the median number of responses per survey version across organizations ranging between 16 and 18. The majority of respondents was between 25 and 50 years old (75%) and have been employed with their organization for more than 3 years (65%). They represented more males (58%) than females (37%), with 5% choosing not to indicate their gender. Participants represented different hierarchical levels (3% top management; 9% middle management; 10% first-line supervisors; 71% employees without leadership responsibility; 7% no answer) and came from all major divisions of their organizations. All respondents were assured full anonymity.

Measures

All survey versions were translated to German through professional translators following a double-blind back-translation procedure to ensure semantic equivalence with the original, English items (Schaffer & Riordan, 2003).

Transformational leadership climate

TFL climate was captured in employee survey version 1 through the instrument developed by Podsakoff and colleagues (1990, 1996), using twenty-two items to assess six dimensions of TFL (i.e., providing a role model, articulating a vision, communicating high performance expectations, fostering the acceptance of common goals, providing intellectual stimulation, and providing individualized support). As Javidan and Dastmalchian (1993) noted, employees are in a particularly good position to provide accurate descriptions of their direct leader's behaviors due to their social proximity to the leader. Thus, in line with previous research on TFL climate (Walter & Bruch, 2010), we asked employees to assess the extent to which their direct leader exhibits TFL behaviors on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*), and we averaged all items to compute an overall TFL score. Then, we aggregated individual employees' TFL ratings into a single organizational-level measure of TFL climate. Based on common statistical benchmarks (Bliese, 2000), this aggregation was empirically justified ($ICC[1] = .11$; $p < .001$; $ICC[2] = .76$; median $r_{wg} = .80$). The internal consistency estimate for TFL climate on the organizational level was .97.

Positive affective climate

We measured organizations' positive affective climate in employee survey version 2, using four positive affect items adapted from Van Katwyk and colleagues' (2000) job-related affective well-being scale. Given that affective climate is distinct but derived from individual-level affect, we decided to employ a referent-shift model (Chan, 1998; George, 1996). Respondents were asked to indicate how often employees in their organization experience the respective positive affective states (i.e., cheerful, content, elated, and satisfied) in their jobs on a 5-point scale from 1 (*never*) to 5 (*extremely often/always*). Items were averaged and, based on appropriate aggregation statistics ($ICC[1] = .14$; $p < .001$; $ICC[2] = .82$; median $r_{wg} = .80$), this measure was aggregated to the organizational level of analysis. Internal consistency reliability for positive affective climate at the organizational level was .87.

Trust climate

We captured organizations' trust climate in employee survey version 3, using the instrument developed by Huff and Kelley (2003). This measure comprises 4 items asking employees to evaluate the level of trust between members throughout their organization. Employees were asked to assess these items on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is: "There is a very high level of trust throughout this organization". Item responses were averaged and, based on acceptable aggregation statistics ($ICC[1] = .16$; $p < .001$; $ICC[2] = .74$; median $r_{wg} = .74$), we aggregated individual employees' ratings to form a single trust climate score for each organization. The internal consistency reliability estimate for this measure at the organizational level was .93.

Workforce performance

We captured *overall employee productivity* in the second key informant survey, asking the respective executives for an overall assessment of employee productivity within their organization, as compared with other organizations in the same industry, on a 7-point scale from 1 (*weak*) to 7 (*strong*; Wall et al., 2004). Further, we captured employees' task performance behavior and organizational citizenship behavior in employee survey version 4, using a seven-point response scale from 1 (*strongly disagree*) to 7 (*strongly agree*). In line with the reasoning outlined before (viz., individual performance aggregates to affect the overall workforce's performance; Chen et al., 2007), we used a direct consensus model for these assessments (Chan, 1998). Employees' *task performance behavior* was measured with three items adapted from Podsakoff and colleagues (1982), asking employees to indicate the extent to which they set high goals for themselves, attain the goals they set, and spend their time effectively in doing their work.⁵ Employees' *organizational citizenship behavior* was captured with Lee and Allen's (2002) eight-item measure of organizational citizenship behaviors directed towards coworkers (OCBI), asking employees, for instance, to assess the extent to which they assist others with their duties and help others who have been absent. We note that prior research has provided ample evidence for the construct validity of such performance self-ratings (e.g., Conway & Lance, 2010; Lance, Hoffman, Baranik, & Gentry, 2008). Item responses were averaged to compute overall task performance behavior scores and organizational citizenship behavior scores, respectively. Given appropriate statistical support, we averaged both of these measures into organization-level aggregate task performance behavior (ICC[1]=.06; $p < .001$; ICC[2]=.66; median $r_{wg} = .87$) and aggregate organizational citizenship behavior (ICC[1]=.04; $p < .001$; ICC[2]=.54; median $r_{wg} = .88$) scores. Internal consistency estimates at the organizational level were .86 and .84, respectively.

Control variables

Participating *organizations' size* was captured in the key informant survey because organization size has been shown to relate with various employee attitudes and behaviors (Ragins, Cotton, & Miller, 2000) and might, therefore, bias our study findings. As is common practice, we measured organization size by asking for the number of employees in the respective organization (converted to full-time equivalents). We log-transformed the number of employees to reduce skewness in the distribution of this measure. To prevent *industry* differences from biasing the relationships obtained, we considered organizations' affiliation with one out of four broad classes of industries (i.e., services, manufacturing, trade, and finance and insurance; as reported by key informants) as a control, following prior research (e.g., Dickson, Resick, & Hanges, 2006). Participant organizations were assigned four dummy-coded variables indicating their affiliation with each of the above industry categories. Further, employees' hierarchical level might influence their ratings of the focal study variables. TFL may, for instance, occur to a greater extent at higher hierarchical echelons (Shamir & Howell, 1999), and employees may tend to rate their job characteristics more favorably the higher their hierarchical positioning (Robie, Ryan, Schmieder, Parra, & Smith, 1998). The organization-level relationships might, therefore, be influenced by the *hierarchical distribution of respondents* in the sample organizations. Thus, we averaged respondents' hierarchy specifications within their organizations (1 = top management, 2 = middle management, 3 = first-line supervisor, 4 = employee without leadership responsibility) and considered this average hierarchical level as a sample covariate. Finally, in line with previous organizational-level research (e.g., Delaney & Huselid, 1996), we used two single-item measures in the first key informant surveys to capture participating *organizations' market competition* ("How strong is the competitive pressure your company experiences?"; 1 = extremely low, 7 = extremely high) and *organizations' research and development (R&D) intensity* ("To what extent does your company engage in research and development activities?"; 1 = extremely low, 7 = extremely high) as control variables, because such factors may influence workforce performance (e.g., Huselid, 1995).

Data analyses

Study hypotheses were assessed at the organizational level of analysis. To test **Hypothesis 1**, we regressed organizations' positive affective climate on the control variables (step 1) and on TFL climate (step 2). To address **Hypotheses 2 and 3**, we regressed our three measures of workforce performance on the control variables in a first hierarchical step. In the second step, we inserted positive affective climate and trust climate into the respective equations (**Hypothesis 2**), before adding the interaction coefficient (i.e., the cross-product) of positive affective climate and trust climate in a third and final step (**Hypothesis 3**; Aiken & West, 1991).

To test the moderated mediation relationship suggested in **Hypothesis 4**, we followed the steps provided by Preacher and colleagues (2007). This approach involves formal significance tests of the indirect relationship between the predictor and the outcome variable, as transmitted by the mediating variable, at different values of the moderator. In other words, we evaluated the statistical significance of the *conditional indirect relationship* between an organization's TFL climate and our measures of workforce performance, as transmitted by positive affective climate, at the mean value of trust climate and at one standard deviation below and above the mean. We used the bootstrap procedures implemented in Preacher et al.'s application in these analyses. Traditional approaches to test the significance of a (conditional) indirect relation (e.g., Sobel, 1982) rest on the assumption that the indirect

⁵ Podsakoff et al.'s (1982) original scale includes a fourth item, capturing the extent to which employees do more work than is required. Following Thompson (2005), however, we contend this item better reflects contextual rather than task performance behavior. To maintain the unidimensionality of our measure, we therefore did not include this item.

Table 1
Descriptive statistics and correlations.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. TFL climate	3.78	.36													
2. Positive affective climate	3.63	.38	.67***												
3. Trust climate	4.72	.44	.64***	.61***											
4. Overall employee productivity	5.83	.84	.15†	.19*	.20*										
5. Aggregate task performance behavior	5.69	.38	.45***	.47***	.39***	.23**									
6. Aggregate organizational citizenship behavior	5.57	.28	.37***	.44***	.25**	.18*	.62***								
7. Organization size (log)	2.11	.47	-.32***	-.34***	-.30***	.01	-.15†	-.20*							
8. Service	0.53	.50	.15†	.11	.25**	.13	.10	.07	-.09						
9. Manufacturing	0.28	.45	-.16*	-.16*	-.18*	-.09	-.10	-.15†	.10	-.66***					
10. Trade	0.13	.34	.05	.07	-.07	-.02	-.02	.08	-.01	-.41***	-.25**				
11. Finance & insurance	0.06	.23	-.07	-.02	-.08	-.08	.02	.02	.00	-.26**	-.16†	-.10			
12. Avg. hierarchical level	3.55	.20	-.28***	-.19*	-.16*	.08	-.12	-.28***	.18*	-.07	-.04	.06	.14†		
13. Market competition	5.62	.99	.19*	.14†	.20*	-.02	.13	.01	.02	.00	.02	-.04	.01	-.11	
14. R&D intensity	4.45	2.21	.12	.12	.11	.02	.12	-.01	.06	.02	.12	-.20*	.01	-.01	.03

Note.
 *** $p < .001$.
 ** $p < .01$.
 * $p < .05$.
 † $p < .10$ (two-tailed).

relationship is normally distributed. This assumption is tenuous, however, because the sampling distribution of an indirect relation is known to be non-normal, even when its elements (i.e., the direct linkages between predictor and mediator, on the one hand, and mediator and outcome, on the other) are normally distributed (Preacher & Hayes, 2004). Bootstrap procedures do not make assumptions about the shape of the sampling distribution of the indirect relation, thus producing more robust results (Edwards & Lambert, 2007; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher et al., 2007). We obtained estimates for the conditional indirect relationships in 5000 bootstrapped samples. Prior to all analyses, the focal study variables were grand-mean centered (Aiken & West, 1991).

Results

Descriptive statistics

Means, standard deviations, and bivariate correlations for all study variables are presented in Table 1. As expected, TFL climate within the participating organizations was positively related with positive affective climate ($r = .67$; $p < .001$), and positive affective climate was positively associated with overall employee productivity ($r = .19$; $p < .05$), aggregate task performance behavior ($r = .47$; $p < .001$) and aggregate organizational citizenship behavior ($r = .44$; $p < .001$). Regarding the sample covariates,

Table 2
Hierarchical regression analysis on positive affective climate.

	Positive affective climate	
	Step 1	Step 2
Organization size (log)	-.32***	-.14*
Service	.15†	.06
Trade	.18*	.09
Finance & insurance	.04	.04
Average hierarchical level	-.12	.02
Market competition	.14†	.03
R&D intensity	.17*	.07
TFL climate		.62***
ΔR^2		.29***
R^2 (adjusted R^2)	.20*** (.17)	.49*** (.46)

Note. Standardized regression weights are shown. † $p < .10$ (two-tailed).
 *** $p < .001$.
 ** $p < .01$.
 * $p < .05$.
 † $p < .10$ (two-tailed).

both organizations' size and average hierarchical level were significantly associated with most of the focal study variables. Also, TFL climate, positive affective climate, and trust climate were less pronounced in manufacturing organizations than in other types of companies, whereas service organizations exhibited higher trust than other companies. Finally, the market competition an organization experienced was positively associated with both TFL climate and trust climate. Following the recommendations of Becker (2005), we repeated all hypothesis tests without control variables. The pattern of results did not change in these analyses.

Confirmatory factor analyses

Given a relatively strong pattern of correlations between the three climate measures (viz., TFL climate, positive affective climate, and trust climate), we used confirmatory factor analyses to assess the distinctiveness of these measures. We first estimated a baseline measurement model with three correlated latent factors. The items for positive affective climate and trust climate were set to load on their respective factors; further, we created six item parcels loading on a TFL climate factor, based on the TFL dimensions described by Podsakoff et al. (1990). This three-factor model yielded an acceptable fit to the data ($\chi^2 = 198.35$, $df = 74$, $p < .001$, CFI = .947, TLI = .935). Further, we also examined the fit of all possible two- and one-factor models by forcing the respective items to load on a common factor. All of these models fit the data significantly worse than the hypothesized three-factor model ($p < .001$), supporting the discriminant validity of the three climate measures (cf. Anderson & Gerbing, 1988).

Hypothesis tests

Results of the hierarchical regression analysis on positive affective climate are depicted in Table 2. As shown, an organization's TFL climate was positively associated with positive affective climate ($\beta = .62$; $p < .001$), even after taking into account the control variables. Hypothesis 1 was therefore supported.

Table 3 shows the results of the hierarchical regression analyses for Hypothesis 2 and the moderated hierarchical regression analyses for Hypothesis 3 on our measures of workforce performance. As shown in step two of these models, positive affective climate was not significantly associated with overall employee productivity; Hypothesis 2a was therefore rejected. Corroborating Hypotheses 2b and 2c, however, positive affective climate was positively related to both aggregate task performance behavior ($\beta = .41$; $p < .001$) and aggregate organizational citizenship behavior ($\beta = .41$; $p < .001$), even after considering control variables.

Step 3 of the moderated hierarchical regression analyses depicted in Table 3 tested Hypothesis 3 by inserting the interaction term of positive affective climate and trust climate. This interaction coefficient reached conventional levels of statistical significance for both overall employee productivity ($\beta = .20$; $p < .05$) and aggregate task performance behavior ($\beta = .18$; $p < .01$), and it was marginally significant for aggregate organizational citizenship behavior ($\beta = .13$; $p = .07$). As shown in Figs. 2–4, the form of these interactions corroborated the predicted patterns, with the linkages between positive affective climate and our measures of workforce performance being more pronounced under conditions of high trust climate than under conditions of low trust climate. We note that the interaction graph for aggregate organizational citizenship behavior should be interpreted with care, given the marginally significant interaction coefficient. Hence, Hypotheses 3a and 3b were supported, and support for Hypothesis 3c was marginal.

The results of the moderated mediation analyses testing Hypothesis 4 are depicted in Table 4. As shown, the conditional indirect relationship of TFL climate with overall employee productivity (through positive affective climate) did not reach statistical significance at one standard deviation below the mean (*boot indirect effect* = $-.04$; n.s.) or at the mean value of trust climate (*boot*

Table 3
Moderated hierarchical regression analyses on workforce performance.

	Overall employee productivity			Aggregate task performance behavior			Aggregate organizational citizenship behavior		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Organization size (log)	-.01	.09	.08	-.21**	-.02	-.04	-.16*	-.03	-.04
Service	.14	.08	.09	.04	-.07	-.06	.10	.05	.05
Trade	.04	.01	.04	.02	-.07	-.04	.15 [†]	.08	.10
Finance & insurance	-.06	-.06	-.05	.05	.04	.04	.10	.09	.09
Average hierarchical level	.11	.13	.13	-.23*	-.17*	-.17*	-.31***	-.26***	-.27***
Market competition	-.01	.02	-.06	.10	.01	.02	.03	-.07	-.07
R&D intensity	.06	-.06	-.00	.13	.03	.02	-.02	-.04	-.05
Positive affective climate		.17	.14		.41***	.39***		.41***	.40***
Trust climate		.13	.13		.18*	.17*		-.03	-.03
Positive affective climate*Trust climate			.20*			.18**			.13 [†]
ΔR^2		.05*	.04*		.22***	.03**		.13***	.02 [†]
R ²	.04	.09	.12*	.14**	.37***	.40***	.15**	.28***	.30***
Adjusted R ²	.00	.03	.06	.10	.33	.36	.11	.24	.25

Note. Standardized regression weights are shown.

*** $p < .001$.

** $p < .01$.

* $p < .05$.

[†] $p < .10$ (two-tailed).

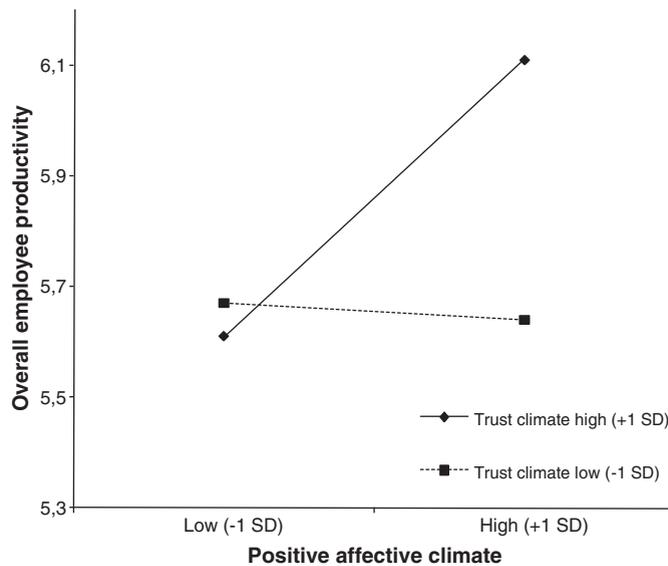


Fig. 2. Interactive effects of positive affective climate and trust climate on overall employee productivity.

indirect effect = .20; n.s.). The conditional indirect relation was positive and significant, however, at one standard deviation above the mean value of trust climate (*boot indirect effect* = .43; $p < .05$). Regarding aggregate task performance behavior, the conditional indirect relationship of TFL climate (through positive affective climate) was insignificant at one standard deviation below the mean of trust climate (*boot indirect effect* = .13; $p = \text{n.s.}$). This conditional indirect relation was significant and positive, however, both at the mean value (*boot indirect effect* = .21; $p < .001$) and at one standard deviation above the mean value of trust climate (*boot indirect effect* = .29; $p < .001$). This pattern of findings supports [Hypotheses 4a](#) and [4b](#), as an organization's positive affective climate mediated the linkage between TFL climate, on the one hand, and overall employee productivity and aggregate task performance behavior, on the other, at higher values of trust climate, but not at lower values of trust climate.

For aggregate organizational citizenship behavior, the conditional indirect relationship was significant at one standard deviation below the mean (*boot indirect effect* = .14; $p = .05$), at the mean (*boot indirect effect* = .19; $p < .001$), and at one standard deviation above the mean value of trust climate (*boot indirect effect* = .23; $p < .001$). In line with the marginally significant interaction coefficient reported in [Table 3](#), [Hypothesis 4c](#) was, therefore, not supported. Although the pattern of results was in the predicted direction, the conditional indirect association of TFL climate with aggregate organizational citizenship behavior (through positive affective climate) remained significant even at relatively low values of trust climate.

Alternative models

Although the results generally supported our proposed moderated mediation model, we examined the potential utility of several alternative models in the following section, in an effort to further corroborate our findings.⁶ The literature has, for example, discussed two fundamentally different models of how trust relates to performance (i.e., main effect vs. moderator; for a review, see [Dirks & Ferrin, 2001](#)). Thus, [Dirks and Ferrin \(2001\)](#) recommended that “researchers should examine main and interactive effects of trust” (p. 462). We therefore tested a series of alternative models in which both positive affective climate and trust climate mediated the TFL climate–workforce performance linkages. Trust climate, however, did not occur as a significant mediator.

Further, we explored whether there might be a three-way interactive relationship (rather than a pattern of moderated mediation) between TFL climate, positive affective climate, and trust climate, on the one hand, and workforce performance, on the other. The respective three-way interaction coefficients, however, did not reach statistical significance for any of the workforce performance measures. Similarly, we did not find evidence for a possible curvilinear relationship of trust climate with the outcome variables, or a curvilinear interaction involving trust climate and positive affective climate.

Finally, given our correlational, cross-sectional data, causal orderings other than the proposed model remain possible. Although statistical tests cannot fully resolve this issue ([Mathieu & Taylor, 2006](#)), we found it important to explore such alternative orderings to provide greater confidence in the plausibility of our predictions. In fact, some scholars have noted that TFL may both influence the context in which such behavior takes place and be influenced by this very context, pointing towards the potential for reciprocal causality ([Pawar & Eastman, 1997](#)). One could argue, therefore, that an organizational climate of positive affect and trust promotes the development of TFL climate, which may, in turn, influence workforce performance. Alternative model analyses

⁶ The ensuing discussion of alternative models was primarily guided by anonymous referees' comments. We thank the referees for encouraging us to further consider these alternative (competing) models. Details on the respective findings can be obtained from the first author.

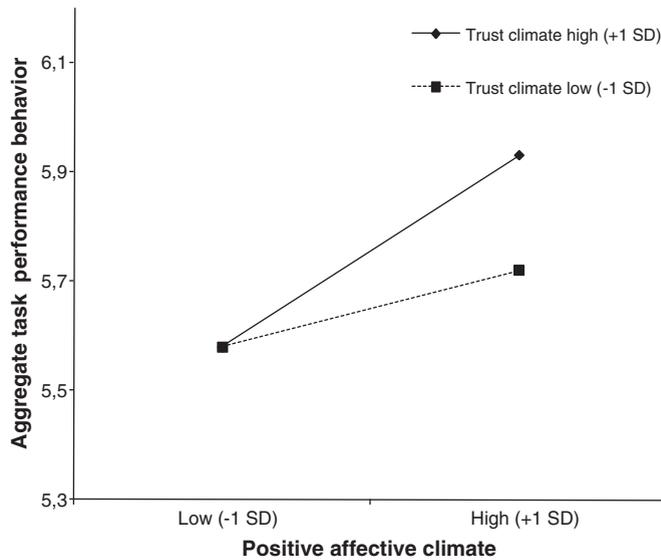


Fig. 3. Interactive effects of positive affective climate and trust climate on aggregate task performance behavior.

demonstrated, however, that TFL climate did not mediate the interactive relationship of positive affective climate and trust climate, on the one hand, with our measures of workforce performance, on the other (viz., an alternative model of mediated moderation). Hence, as compared to the alternative models, the model depicted in Fig. 1 appears to better fit the data.

Discussion

With this organizational-level study, we sought to learn more about the performance linkages of TFL climate and the associated mechanisms and boundary conditions. We hypothesized that an organization's TFL climate relates to its positive affective climate, which in turn relates to overall employee productivity, aggregate task performance behavior, and aggregate organizational citizenship behavior under conditions of high, but not low trust climate. Study results confirmed the resulting moderated mediation model (see Fig. 1) for overall employee productivity and aggregate task performance behavior. Unexpectedly, we observed a somewhat different pattern of relationships for aggregate organizational citizenship behavior, in that an organization's positive affective climate mediated the TFL climate–aggregate organizational citizenship behavior linkage even at relatively low values of trust climate. Thus, while distracting employees from efficient and effective task pursuit, a lack of trust climate may impact to a more limited extent on employees' willingness and ability to react upon the organization's positive affective climate by

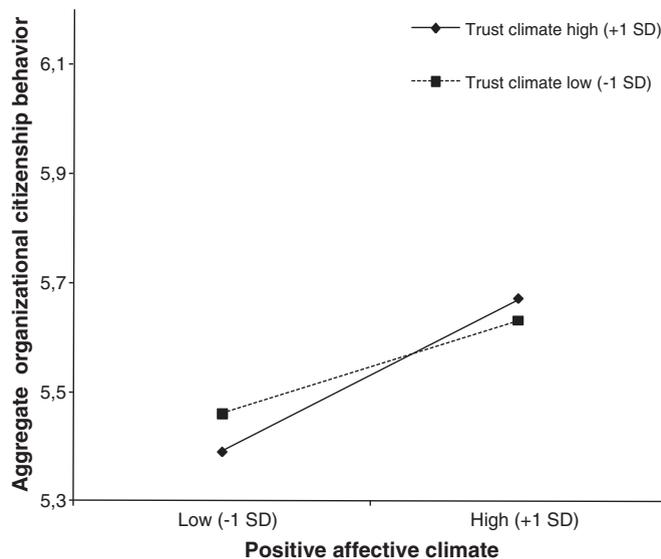


Fig. 4. Interactive effects of positive affective climate and trust climate on aggregate organizational citizenship behavior.

Table 4

Conditional indirect effect of TFL climate on workforce performance, through positive affective climate at different values of trust climate.

	Overall employee productivity			Aggregate task performance behavior			Aggregate organizational citizenship behavior		
	Boot ind. effect	Boot SE	Boot p	Boot ind. effect	Boot SE	Boot p	Boot ind. effect	Boot SE	Boot p
– 1 SD	–.04	.19	.851	.13	.07	.078	.14	.07	.041
Mean	.20	.16	.217	.21	.06	.000	.19	.05	.001
+ 1 SD	.43	.18	.015	.29	.07	.000	.23	.07	.001

Note. Unstandardized results are shown. Controlling for organization size, industry, average hierarchical level, market competition, and R&D intensity. SE = Standard error. – 1 SD = one standard deviation below the mean value of trust climate; Mean = mean value of trust climate; + 1 SD = one standard deviation above the mean value of trust climate. Bootstrap $n = 5000$.

engaging in organizational citizenship behavior. Potentially, the tendencies towards cooperative, prosocial behavior triggered by positive affective climate (George, 1990, 1996; Vacharkulksemsuk et al., 2011) are more stable than we had initially assumed, evoking such behavior even in low-trust settings where others cannot be assumed to reciprocate in kind. Further research is required, however, to more conclusively evaluate this pattern of results.

Overall, our findings contribute to several research streams. In the domain of leadership, our study is among the first to investigate organization-level TFL climate. Previous studies on TFL at the organizational level of analysis have typically examined single transformational leaders at the top of the organization (e.g., CEOs, see Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006; Colbert, Kristof-Brown, Bradley, & Barrick, 2008; Ling, Simsek, Lubatkin, & Veiga, 2008). In contrast, we considered TFL as an organizational-level climate variable, capturing the extent to which leaders throughout the organization direct similar TFL behaviors toward their followers. In line with the limited literature in this area (e.g., Walter & Bruch, 2010), the results demonstrated that TFL climate is a meaningful predictor of important organization-level outcome variables (i.e., organizations' positive affective climate and workforce performance). Notably, even though previous research on top managerial TFL has provided crucial insights, the overall pattern of findings derived from this body of literature has remained somewhat ambiguous (e.g., Agle et al., 2006; Ling et al., 2008). Thus, our focus on TFL climate may complement such research and contribute to a more comprehensive depiction of the organization-level linkages of TFL, explicating how organizations can benefit from the presence of the respective behaviors among their leaders.

Second, we reveal positive affective climate as an organization-level mediator between TFL climate and workforce performance. Ashkanasy and Jordan (2008, p. 32) recently argued that “more understanding is ... needed of the impact of leaders on the affective climate in organizations.” Our findings suggest that if leaders across the organization engage in TFL behaviors, positive affect spreads throughout the organization (Dasborough et al., 2009), offering the potential for enhanced levels of productivity, task performance behavior, and organizational citizenship behavior. We therefore corroborate prior theorizing and research pointing to the affective nature of TFL (e.g., Ashforth & Humphrey, 1995; Ashkanasy & Humphrey, 2011; Ashkanasy & Tse, 2000; Humphrey, 2008), and we show that such affective mechanisms also apply at the organizational level of analysis.

Finally, our findings contribute to the rich research stream on trust within organizations (e.g., Colquitt, Scott, & LePine, 2007; Hurley, 2006; Schoorman, Mayer, & Davis, 2007) and connect this research with the literatures on both affect in the workplace and TFL. The present study strengthens the perspective that trust may function as a moderator in the relationship between important organization-level variables (Dirks & Ferrin, 2001). Specifically, our results corroborate Shamir and Howell's (1999) notion that the effectiveness of TFL may hinge upon the presence of trust within organizations, addressing calls by various scholars for research examining the boundary conditions of such leadership (e.g., Bass, 1999; Conger, 1999). Further, this study emphasizes the importance of investigating affect in conjunction with trust and adds to the emerging literature on this issue (Anderson & Thompson, 2004; Dunn & Schweitzer, 2005; Michaelis, Stegmaier, & Sonntag, 2009) by demonstrating that the relationship between positive affective climate and workforce performance is contingent upon an organization's trust climate.

Practical implications

Our research corroborates the relevance of TFL for organizations, given that a pronounced TFL climate can benefit both an organization's positive affective climate and its workforce performance. Hence, our findings encourage organizations to create a strong TFL climate by developing and fostering TFL behaviors among leaders throughout the hierarchy (Spreitzer & Quinn, 1996). Previous work suggests several possible ways to achieve this, including leader selection and retention based on adequate personality characteristics (e.g., high extraversion; Bono & Judge, 2004), systematic leadership development efforts (Day, 2001), top managerial role modeling (Bass et al., 1987), and the establishment of an appropriate organizational structure and culture (e.g., Shamir & Howell, 1999; Walter & Bruch, 2010).

Further, our results also direct practitioners' attention to the mechanisms and boundary conditions of TFL. Specifically, we demonstrate that TFL climate is related to workforce performance through an organization's positive affective climate, and that this linkage hinges – at least partially – on the organization's trust climate. Therefore, organizations may strive to foster high trust among their members. The literature has discussed various antecedents of trust that may be relevant in this regard (Mayer et al., 1995; Williams, 2001). For example, organizations may want to consider employee's propensity to trust in hiring and promotion

decisions, and they may want to establish lasting relationships with their employees (Dirks & Ferrin, 2001). Furthermore, Whitener (1997) suggests several other human resource management activities to build trust. These include the training of organization members' communication and influence skills to ascertain transparency and the assignment of clearly defined work roles to avoid misunderstandings and vague responsibilities.

Limitations and research implications

In spite of several methodological strengths (e.g., a large sample from diverse industries; independent data sources for all focal variables), there are limitations to the present research that call for attention in interpreting the results. First, all data were collected utilizing a cross-sectional field-study design. Therefore, causality cannot unambiguously be inferred. Based on the theoretical arguments outlined before, we hold the directions of causality assumed in this study are likely. Also, as demonstrated in the alternative model analyses, our hypothesized pattern of relationships is more viable than some alternative patterns. Nevertheless, one cannot exclude all potential alternative models based on the present data. It might, therefore, be fruitful for future research to address this important issue through (quasi-) experimental or longitudinal study designs.

Second, the generalizability of our results is limited because all participant organizations were located in Germany. With cultural factors potentially shaping leadership processes (House, Hanges, Javidan, Dorfman, & Gupta, 2004), the relationships found in this study might follow different patterns if measured in other countries. Scholars could achieve greater cross-cultural validity by sampling organizations from diverse national backgrounds. In a similar vein, we caution readers that our sample consisted of organizations with no more than 5000 employees. Researchers could strive to obtain study samples that also comprise larger organizations to further generalize the present findings. Another issue is that our control variables account only to a limited extent for the potential impact of structural, technological, and strategic factors on our findings. Although we assessed organization's size, industry, average hierarchical level, market competition, and R&D intensity, the collection of further control variables (e.g., union coverage, growth, capital intensity; Huselid, 1995) may be warranted in future research.

Third, low response rates within participating organizations may be a source of concern. It should be noted, however, that our average within-organization response rate of 59% compares favorably to those reported in prior research (e.g., Griffith, 2006; Lincoln & Kalleberg, 1996). Also, post-hoc analyses revealed that the pattern of results remained unchanged (a) when including within-organization response rate as an additional control variable and (b) when omitting organizations with response rates below 30% ($n = 18$). We conclude that the present study findings are unlikely to be biased by within-organization response patterns.

Finally, although our use of self-reported performance measures is in line with prior research (e.g., Heidemeier & Moser, 2009), we note that such ratings may suffer from self-serving biases and socially desirable responding. Given that (a) we obtained ratings for workforce performance and for the other study variables from different sources, (b) we found high within-organization similarity and systematic between-organization differences in employees' performance ratings, and (c) our results are based on not only employees' performance self-ratings, but also top executives' ratings of overall employee productivity, such issues seem unlikely to have significantly biased our findings.

An anonymous reviewer alerted us, however, to the possibility that organizational-level factors may systematically influence the response patterns of all employees belonging to a distinct organization, thus implying a potential common source bias at the organizational level. For example, some organizations may seek to promote a distinct image of the organization and thus encourage specific impression management strategies among their employees (Hatch & Schultz, 1997). In such organizations, we may expect elevated levels of socially desirable responding. Future studies might, therefore, aim to collect data from both internal and external sources (e.g., consultants, customers), or data that are less likely to be affected by personally or organizationally driven response patterns (e.g., operational or financial performance; Combs, Crook, & Shook, 2005). Another solution is to measure and control for the degree of socially desirable responding within organizations (Holtgraves, 2004; Moorman & Podsakoff, 1992; Zerbe & Paulhus, 1987).

Beyond addressing study limitations, this investigation suggests other directions for future research. First, it may be possible to integrate the present perspective on TFL climate with research on top managerial TFL. Given previous evidence that TFL behaviors may cascade down the hierarchy (Bass et al., 1987), top managers' TFL seems likely to influence the respective behaviors of leaders at lower hierarchical echelons (cf. Waldman & Yammarino, 1999), contributing to the development of a pronounced TFL climate that, in turn, may enhance the performance of employees throughout the organization. In other words, TFL climate may mediate the relationship between top managers' TFL and workforce performance. Examining such indirect relationships may clarify the mixed findings on the effects of top level TFL (e.g., Agle et al., 2006; Ling et al., 2008) and contribute to a better understanding of the mechanisms by which top managers can impact their organizations' outcomes.

Further, scholars could focus on additional types of leadership in organizations (e.g., transactional leadership; cf. Bass, 1985), exploring similarities and differences in the performance effects of different leadership climates. This might contribute to more comprehensive knowledge about the functioning and the boundary conditions of different types of leadership at the organizational level of analysis. Similarly, it may be worthwhile to consider additional mediating mechanisms that may transfer the performance effects of an organization's leadership climate. Given that positive and negative affect have been found to represent largely independent dimensions that are related to different classes of variables (Cropanzano, Weiss, Hale, & Reb, 2003), researchers may, for example, examine whether TFL climate influences organization-level performance outcomes not only by strengthening positive affective climate, but also by diminishing negative affective climate (cf. McColl-Kennedy & Anderson, 2002).

Finally, future research may extend the present model by examining additional boundary conditions of TFL climate effectiveness. Besides focusing on interactive effects in the association between positive affective climate and workforce performance, it may be particularly valuable to explore potential moderators in the link between TFL climate and an organization's positive affective climate. The overall level of employees' trust in management (Mayer & Gavin, 2005) or the quality of leader-member exchange relations (Wang, Law, Hackett, Wang, & Chen, 2005) within the organization may be important in this regard. Also, given the relevance of leaders' displays of emotionality for leadership processes and outcomes (Ashkanasy & Humphrey, 2011; Bono & Ilies, 2006; Johnson, 2008), it may be interesting to investigate how leaders' collective tendency to express rather than withhold emotive displays in organizations (i.e., their shared emotional expressivity; Gross & John, 1997) shapes the linkage between TFL climate and positive affective climate. In sum, we hope this study contributes to a better understanding of the complex mechanisms and the boundary conditions by which an organization's leadership climate is associated with workforce performance and provides a solid foundation for future research on these issues.

References

- Agle, B. R., Nagarajan, N. J., Sonnenfeld, J. A., & Srinivasan, D. (2006). Does CEO charisma matter? An empirical analysis of the relationships among organizational performance, environmental uncertainty, and top management perceptions of CEO charisma. *Academy of Management Journal*, 49, 161–174.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411–423.
- Anderson, C., & Thompson, L. L. (2004). Affect from the top down: How powerful individuals' positive affect shapes negotiations. *Organizational Behavior and Human Decision Processes*, 95, 125–139.
- Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, 18, 88–115.
- Ashforth, B. E., & Humphrey, R. H. (1995). Emotion in the workplace: A reappraisal. *Human Relations*, 48, 97–126.
- Ashkanasy, N. M. (2003). Emotions at multiple levels: An integration. In F. J. Yammarino, & F. Dansereau (Eds.), *Multi-level issues in organizational behavior and strategy* (pp. 71–81). Oxford, UK: JAI Press.
- Ashkanasy, N. M. (2003). Emotions in organizations: A multi-level perspective. In F. J. Yammarino, & F. Dansereau (Eds.), *Multi-level issues in organizational behavior and strategy* (pp. 9–54). Oxford, UK: JAI Press.
- Ashkanasy, N. M., & Ashton-James, C. E. (2007). Positive emotion in organizations: A multi-level framework. In D. Nelson, & C. L. Cooper (Eds.), *Positive organizational behavior* (pp. 57–73). London: Sage.
- Ashkanasy, N. M., & Humphrey, R. H. (2011). A multi-level view of leadership and emotions: Leading with emotional labor. In A. Bryman, D. Collinson, K. Grint, B. Jackson, & M. Uhl-Bien (Eds.), *The SAGE handbook of leadership* (pp. 365–379). London: Sage.
- Ashkanasy, N. M., & Jordan, P. J. (2008). A multilevel view of leadership and emotion. In R. H. Humphrey (Ed.), *Affect and emotion: New directions in management theory and research* (pp. 17–39). Charlotte, NC: Information Age.
- Ashkanasy, N. M., & Tse, B. (2000). Transformational leadership as management of emotion: A conceptual review. In N. M. Ashkanasy, C. E. J. Härtel, & W. J. Zerbe (Eds.), *Emotions in the workplace. Research, theory, and practice* (pp. 221–235). Westport, CT: Quorum.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly*, 47, 644–675.
- Bass, B. M. (1985). Leadership: Good, better, best. *Organizational Dynamics*, 13, 26–40.
- Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work & Organizational Psychology*, 8, 9–32.
- Bass, B. M., Waldman, D. A., Avolio, B. J., & Bebb, M. (1987). Transformational leadership and the falling dominoes effect. *Group & Organizational Studies*, 12, 73–87.
- Beal, D. J., Cohen, R. R., Burke, M. J., & McLendon, C. L. (2003). Cohesion and performance in groups: A meta-analytic clarification of construct relations. *Journal of Applied Psychology*, 88, 989–1004.
- Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, 8, 274–289.
- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein, & S. W. J. Kozlowski (Eds.), *Multilevel theory, research and methods in organizations. Foundations, extensions, and new directions* (pp. 349–381). San Francisco: Jossey-Bass.
- Bliese, P. D., & Halverson, R. R. (1998). Group consensus and psychological well-being: A large field study. *Journal of Applied Social Psychology*, 28, 563–580.
- Bommer, W. H., Rubin, R. S., & Baldwin, T. T. (2004). Setting the stage for effective leadership: Antecedents of transformational leadership behavior. *The Leadership Quarterly*, 15, 195–210.
- Bono, J. E., Folds, H. J., Vinson, G., & Muros, J. P. (2007). Workplace emotions: The role of supervision and leadership. *Journal of Applied Psychology*, 92, 1357–1367.
- Bono, J. E., & Ilies, R. (2006). Charisma, positive emotions, and mood contagion. *The Leadership Quarterly*, 17, 317–334.
- Bono, J. E., & Judge, T. A. (2004). Personality and transformational and transactional leadership: A meta-analysis. *Journal of Applied Psychology*, 89, 901–910.
- Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance*, 10, 99–109.
- Boselie, P., Dietz, G., & Boon, C. (2005). Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal*, 15, 67–94.
- Brett, J. M., & Stroh, L. K. (2003). Working 61 plus hours a week: Why do managers do it? *Journal of Applied Psychology*, 88, 67–78.
- Carlson, M., Charlin, V., & Miller, N. (1988). Positive mood and helping behavior: A test of six hypotheses. *Journal of Personality and Social Psychology*, 55, 211–229.
- Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, 83, 234–246.
- Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology*, 76, 893–910.
- Chen, G., & Bliese, P. D. (2002). The role of different levels of leadership in predicting self- and collective efficacy: Evidence for discontinuity. *Journal of Applied Psychology*, 87, 549–556.
- Chen, G., Kirkman, B. L., Kanfer, R., Allen, D., & Rosen, B. (2007). A multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology*, 92, 331–346.
- Colbert, A. E., Kristof-Brown, A. L., Bradley, B. H., & Barrick, M. R. (2008). CEO transformational leadership: The role of goal importance congruence in top management teams. *Academy of Management Journal*, 51, 81–96.
- Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, 92, 909–927.
- Combs, J. G., Crook, T. R., & Shook, C. L. (2005). The dimensionality of organizational performance and its implications for strategic management research. In K. T. Leicht (Ed.), *Research in social stratification and mobility* (pp. 259–286). Amsterdam: Elsevier.
- Conger, J. A. (1999). Charismatic and transformational leadership in organizations: An insider's perspective on these developing streams of research. *The Leadership Quarterly*, 10, 145–169.
- Conger, J. A., & Kanungo, R. N. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review*, 12, 637–647.

- Conway, J. M., & Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology, 25*, 325–334.
- Cropanzano, R., Weiss, H. M., Hale, J. M. S., & Reb, J. (2003). The structure of affect: reconsidering the relationship between negative and positive affectivity. *Journal of Management, 29*, 831–857.
- Currall, S. C., & Inkpen, A. C. (2002). A multilevel approach to trust in joint ventures. *Journal of International Business Studies, 33*, 479–495.
- Dasborough, M. T., Ashkanasy, N. M., Tee, E. Y. J., & Tse, H. H. M. (2009). What goes around comes around: How meso-level negative emotional contagion can ultimately determine organizational attitudes toward leaders. *The Leadership Quarterly, 20*, 571–585.
- Day, D. V. (2001). Leadership development: A review in context. *The Leadership Quarterly, 11*, 581.
- Delaney, J. T., & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal, 39*, 949–969.
- Deutsch Salomon, S., & Robinson, S. L. (2008). Trust that binds: The impact of collective felt trust on organizational performance. *Journal of Applied Psychology, 93*, 593–601.
- Dickson, M. W., Resick, C. J., & Hanges, P. J. (2006). Systematic variation in organizationally-shared cognitive prototypes of effective leadership based on organizational form. *The Leadership Quarterly, 17*, 487–505.
- Dietz, G., & Den Hartog, D. N. (2006). Measuring trust inside organisations. *Personnel Review, 35*, 557–588.
- Dirks, K. T., & Ferrin, D. L. (2001). The role of trust in organizational settings. *Organizational Science, 12*, 450–467.
- Dunn, J. R., & Schweitzer, M. E. (2005). Feeling and believing: The influence of emotion on trust. *Journal of Personality and Social Psychology, 88*, 736–748.
- Eastman, W. (1998). Working for position: Women, men, and managerial work hours. *Industrial Relations, 37*, 51–66.
- Eder, P., & Eisenberger, R. (2008). Perceived organizational support: Reducing the negative influence of coworker withdrawal behavior. *Journal of Management, 34*, 55–68.
- Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods, 12*, 1–22.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117–140.
- Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*, 300–319.
- Fredrickson, B. L. (2003). Positive emotions and upward spirals in organizations. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 163–175). San Francisco: Berrett-Koehler.
- Gamero, N., González-Romá, V., & Peiró, J. M. (2008). The influence of intra-team conflict on work teams' affective climate: A longitudinal study. *Journal of Occupational and Organizational Psychology, 81*, 47–69.
- Gavin, M. B., & Hofmann, D. A. (2002). Using hierarchical linear modeling to investigate the moderating influence of leadership climate. *The Leadership Quarterly, 13*, 15–33.
- George, J. M. (1990). Personality, affect, and behavior in groups. *Journal of Applied Psychology, 75*, 107–116.
- George, J. M. (1996). Group affective tone. In M. West (Ed.), *Handbook of work group psychology* (pp. 77–93). Sussex, UK: Wiley.
- Grant, A. M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology, 93*, 48–58.
- Grawitch, M. J., Munz, D. C., & Kramer, T. J. (2003). Effects of member mood states on creative performance in temporary work groups. *Group Dynamics: Theory, Research, and Practice, 7*, 41–54.
- Griffith, J. (2006). A compositional analysis of the organizational climate–performance relation: Public schools as organizations. *Journal of Applied Social Psychology, 36*, 1848–1880.
- Gross, J. J., & John, O. P. (1997). Revealing feelings: Facets of emotional expressivity in self-reports, peer ratings, and behavior. *Journal of Personality and Social Psychology, 72*, 435–448.
- Guthrie, J. P. (2001). High-involvement work practices, turnover, and productivity: Evidence from New Zealand. *Academy of Management Journal, 44*, 180–190.
- Hackman, J. R. (1992). Group influences on individuals in organizations. In M. D. Dunnette, & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology, Vol. 3* (pp. 199–267). Palo Alto, CA: Consulting Psychologists Press.
- Hareli, S., & Rafaeli, A. (2008). Emotion cycles: On the social influence of emotion in organizations. *Research in Organizational Behavior, 28*, 35–59.
- Hatch, M. J., & Schultz, M. (1997). Relations between organizational culture, identity and image. *European Journal of Marketing, 31*, 356–365.
- Heidemeier, H., & Moser, K. (2009). Self-other agreement in job performance ratings: A meta-analytic test of a process model. *Journal of Applied Psychology, 94*, 353–370.
- Holtgraves, T. (2004). Social desirability and self-reports: Testing models of socially desirable responding. *Personality and Social Psychology Bulletin, 30*, 161–172.
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P., & Gupta, V. (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Thousand Oaks, CA: Sage.
- Huff, L., & Kelley, L. (2003). Levels of organizational trust in individualist versus collectivistic societies: A seven-nation study. *Organizational Science, 14*, 81–90.
- Humphrey, R. H. (2002). The many faces of emotional leadership. *The Leadership Quarterly, 13*, 493–504.
- Humphrey, R. H. (2008). The right way to lead with emotional labor. In R. H. Humphrey (Ed.), *Affect and emotion: New directions in management theory and research* (pp. 1–17). Charlotte, NC: Information Age.
- Humphrey, R. H., Pollack, J. M., & Hawver, T. (2008). Leading with emotional labor. *Journal of Managerial Psychology, 23*, 151–168.
- Hurley, R. F. (2006). The decision to trust. *Harvard Business Review, 84*, 55–62.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal, 38*, 635–672.
- Isen, A. M., & Baron, R. A. (1991). Positive affect as a factor in organizational behavior. *Research in Organizational Behavior, 13*, 1–53.
- James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology, 67*, 219–229.
- James, L. R., Choi, C. C., Ko, C. E., McNeil, P. K., Minton, M. K., Wright, M. A., et al. (2008). Organizational and psychological climate: A review of theory and research. *European Journal of Work and Organizational Psychology, 17*, 5–32.
- Javidan, M., & Dastmalchian, A. (1993). Assessing senior executives: The impact of context on their roles. *The Journal of Applied Behavioral Science, 29*, 328–342.
- Johnson, S. K. (2008). I second that emotion: Effects of emotional contagion and affect at work on leader and follower outcomes. *The Leadership Quarterly, 19*, 1–19.
- Jones, G. R., & George, J. M. (1998). The experience and evolution of trust: Implications for cooperation and teamwork. *Academy of Management Review, 23*, 531–546.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89*, 755–768.
- Kaplan, S., Bradley, J. C., Luchman, J. N., & Haynes, D. (2009). On the role of positive and negative affectivity in job performance: A meta-analytic investigation. *Journal of Applied Psychology, 94*, 162–176.
- Klein, K. J., Dansereau, F., & Hall, R. I. (1994). Levels issues in theory development, data collection, and analysis. *Academy of Management Review, 19*, 195–229.
- Klein, K. J., & Kozlowski, S. W. J. (2000). From micro to meso: Critical steps in conceptualizing and conducting multilevel research. *Organizational Research Methods, 3*, 211–236.
- Kozlowski, S. W. J., & Hattrup, K. (1992). A disagreement about within-group agreement: Disentangling issues of consistency versus consensus. *Journal of Applied Psychology, 77*, 161–167.
- Kruglanski, A. W., & Maysel, O. (1990). Classic and current social comparison research: Expanding the perspective. *Psychological Bulletin, 108*, 195–208.
- Lance, C. E., Hoffman, B. J., Baranik, L. E., & Gentry, W. A. (2008). Rater source factors represent important subcomponents of the criterion construct space, not rater bias. *Human Resource Management Review, 18*, 223–232.
- Lau, D. C., & Lam, L. W. (2008). Effects of trusting and being trusted on team citizenship behaviors in chain stores. *Asian Journal of Social Psychology, 11*, 141–149.
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology, 87*, 131–142.
- Lincoln, J. R., & Kalleberg, A. L. (1996). Commitment, quits, and work organization in Japanese and U.S. plants. *Industrial & Labor Relations Review, 50*, 39–59.

- Ling, Y., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. (2008). The impact of transformational CEOs on the performance of small- to medium-sized firms: Does organizational context matter? *Journal of Applied Psychology*, *93*, 923–934.
- Lowe, K. B., & Kroeck, G. K. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic. *The Leadership Quarterly*, *7*, 385–425.
- MacKinnon, D. P., Lockwood, C. M., Hoffmann, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychology Methods*, *7*, 83–104.
- Martin, A. J. (2004). The role of positive psychology in enhancing satisfaction, motivation, and productivity in the workplace. *Journal of Organizational Behavior Management*, *24*, 113–133.
- Mathieu, J. E., & Kohler, S. S. (1990). A cross-level examination of group absence influences on individual absence. *Journal of Applied Psychology*, *75*, 217–220.
- Mathieu, J. E., & Taylor, S. R. (2006). Clarifying conditions and decision points for mediational type inferences in organizational behavior. *Journal of Organizational Behavior*, *27*, 1031–1056.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, *20*, 709–734.
- Mayer, R. C., & Gavin, M. B. (2005). Trust in management and performance: Who minds the shop while the employees watch the boss? *Academy of Management Journal*, *48*, 874–888.
- McColl-Kennedy, J. R., & Anderson, R. D. (2002). Impact of leadership style and emotions on subordinate performance. *The Leadership Quarterly*, *13*, 545–559.
- McEvily, B., Perrone, V., & Zaheer, A. (2003). Trust as an organizing principle. *Organization Science*, *14*, 91–103.
- Michaelis, B., Stegmaier, R., & Sonntag, K. (2009). Affective commitment to change and innovation implementation behavior: The role of charismatic leadership and employees' trust in top management. *Journal of Change Management*, *9*, 399–417.
- Moorman, R. H., & Podsakoff, P. M. (1992). A meta-analytic review and empirical test of the potential confounding effects of social desirability response sets in organizational behavior research. *Journal of Occupational and Organizational Psychology*, *65*, 131–149.
- Morgeson, F. P., & Hofmann, D. A. (1999). The structure and function of collective constructs: Implications for multilevel research and theory development. *Academy of Management Review*, *24*, 249–265.
- Motowidlo, S. J., & van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, *79*, 475–480.
- Newcombe, M. J., & Ashkanasy, N. M. (2002). The role of affect and affective congruence in perceptions of leaders: An experimental study. *The Leadership Quarterly*, *13*, 601–614.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Ostroff, C. (1993). Comparing correlations based on individual-level and aggregated data. *Journal of Applied Psychology*, *78*, 569–582.
- Pawar, B. S., & Eastman, K. K. (1997). The nature and implications of contextual influences on transformational leadership: A conceptual examination. *Academy of Management Review*, *22*, 80–109.
- Pirola-Merlo, A., Härtel, C., Mann, L., & Hirst, G. (2002). How leaders influence the impact of affective events on team climate and performance in R&D teams. *The Leadership Quarterly*, *13*, 561–581.
- Ployhart, R. E. (2004). Organizational staffing: A multilevel review, synthesis, and model. In J. J. Martocchio (Ed.), *Research in personnel and human resources management*, Vol 23 (pp. 121–176). Oxford, UK: Elsevier.
- Podsakoff, P. M., MacKenzie, S. B., & Bommer, W. H. (1996). Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors. *Journal of Management*, *22*, 259–298.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. -Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*, 873–903.
- Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly*, *1*, 107–142.
- Podsakoff, P. M., Todor, W. D., & Skov, R. (1982). Effects of leader contingent and noncontingent reward and punishment behaviors on subordinate performance and satisfaction. *Academy of Management Journal*, *25*, 810–821.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*, 717–731.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, *42*, 185–227.
- Ragins, B. R., Cotton, J. L., & Miller, J. S. (2000). Marginal mentoring: The effects of type of mentor, quality of relationship, and program design on work and career attitudes. *Academy of Management Journal*, *43*, 1177–1194.
- Rico, R., Sánchez-Manzanares, M., Gil, F., & Gibson, C. (2008). Team implicit coordination processes: A team knowledge-based approach. *Academy of Management Review*, *33*, 163–184.
- Robie, C., Ryan, A. M., Schmieder, R. A., Parra, L. F., & Smith, P. C. (1998). The relation between job level and job satisfaction. *Group & Organization Management*, *23*, 470–495.
- Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of Applied Psychology*, *87*, 66–80.
- Rousseau, D. M. (1985). Issues of level in organizational research: Multi-level and cross-level perspectives. *Research in organizational behavior*, *7*, 1–37.
- Schaffer, B. S., & Riordan, C. M. (2003). A review of cross-cultural methodologies for organizational research: A best-practices approach. *Organizational Research Methods*, *6*, 169–215.
- Schnake, M. E., & Dumler, M. P. (2003). Levels of measurement and analysis issues in organizational citizenship behaviour research. *Journal of Occupational and Organization Psychology*, *76*, 283–301.
- Schneider, B. (1987). The people make the place. *Personnel Psychology*, *40*, 437–453.
- Schneider, B., & Reichers, A. E. (1983). On the etiology of climates. *Personnel Psychology*, *36*, 19–39.
- Schoorman, F. D., Mayer, R. C., & Davis, J. H. (2007). An integrative model of organizational trust: Past, present, and future. *Academy of Management Review*, *32*, 344–354.
- Scullen, S. E., Bergery, P. K., & Aiman-Smith, L. (2005). Forced distribution rating systems and the improvement of workforce potential: A baseline simulation. *Personnel Psychology*, *58*, 1–31.
- Seo, M., Feldman Barrett, L., & Bartunek, J. (2004). The role of affective experience in work motivation. *Academy of Management Review*, *29*, 423–439.
- Shamir, B., & Howell, J. M. (1999). Organizational and contextual influences on the emergence and effectiveness of charismatic leadership. *The Leadership Quarterly*, *10*, 257–283.
- Shaw, J. D., Gupta, N., & Delery, J. E. (2005). Alternative conceptualizations of the relationship between voluntary turnover and organizational performance. *Academy of Management Journal*, *48*, 50–68.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290–312). San Francisco: Jossey-Bass.
- Spreitzer, G. M., & Quinn, R. E. (1996). Empowering middle managers to be transformational leaders. *The Journal of Applied Behavioral Science*, *32*, 237–261.
- Thompson, M. M. (2005). Proactive personality and job performance: A social capital perspective. *Journal of Applied Psychology*, *90*, 1011–1017.
- Tsai, W. -C., Chen, C. -C., & Liu, H. -L. (2007). Test of a model linking employee positive moods and task performance. *Journal of Applied Psychology*, *92*, 1570–1583.
- Tse, H. H. M., Dasborough, M. T., & Ashkanasy, N. M. (2008). A multi-level analysis of team climate and interpersonal exchange relationships at work. *The Leadership Quarterly*, *19*, 195–211.
- Vacharkulksemsuk, T., Sekerka, L. E., & Fredrickson, B. L. (2011). Establishing a positive emotional climate to create 21st-century organizational change. In N. M. Ashkanasy, C. P. M. Wilderom, & M. F. Peterson (Eds.), *The handbook of organizational culture and climate* (pp. 101–118). (2nd ed.). Thousand Oaks, CA: Sage.
- Van Katwyk, P. T., Fox, S., Spector, P. E., & Kelloway, E. K. (2000). Using the job-related affective well-being scale (JAWS) to investigate affective responses to work stressors. *Journal of Occupational Health Psychology*, *5*, 219–230.

- Waldman, D. A., & Yammarino, F. J. (1999). CEO charismatic leadership: Levels-of-management and levels-of-analysis effects. *Academy of Management Review*, 24, 266–285.
- Wall, T. D., Michie, J., Patterson, M., Wood, S. J., Sheehan, M., Clegg, C. W., et al. (2004). On the validity of subjective measures of company performance. *Personnel Psychology*, 57, 95–118.
- Walter, F., & Bruch, H. (2008). The positive group affect spiral: A dynamic model of the emergence of positive affective similarity in work groups. *Journal of Organizational Behavior*, 29, 239–261.
- Walter, F., & Bruch, H. (2010). Structural impacts on the occurrence and effectiveness of transformational leadership: An empirical study at the organizational level of analysis. *The Leadership Quarterly*, 21, 765–782.
- Wang, H., Law, K. S., Hackett, R. D., Wang, D., & Chen, Z. X. (2005). Leader–member exchange as a mediator of the relationship between transformational leadership and followers' performance and organizational citizenship behavior. *Academy of Management Journal*, 48, 420–432.
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in organizational behavior*, 18, 1–74.
- Whitener, E. M. (1997). The impact of human resource activities on employee trust. *Human Resource Management Review*, 7, 389–404.
- Wilderom, C. P. M. (2011). Towards positive work cultures and climates. In N. M. Ashkanasy, C. P. M. Wilderom, & M. F. Peterson (Eds.), *The handbook of organizational culture and climate* (pp. 79–84). (2nd ed.). Thousand Oaks, CA: Sage.
- Williams, M. (2001). In whom we trust: Group membership as an affective context for trust development. *Academy of Management Review*, 26, 377–396.
- Williams, M. (2007). Building genuine trust through interpersonal emotion management: A threat regulation model of trust and collaboration across boundaries. *Academy of Management Review*, 32, 595–621.
- Zerbe, W. J., & Paulhus, D. L. (1987). Socially desirable responding in organizational behavior: A reconception. *Academy of Management Review*, 12, 250–264.