Leadership and Organizational Culture:

An Integrative View of Leaders as Culture Creators

and Culture as Social Context

by

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ABSTRACT

Despite the vast amount of research within the leadership and culture domains, a paucity of research has integrated the two literatures. This dissertation investigates leadership, organizational culture, and the dynamic interplay between them. It is composed of three papers with the objective to integrate leadership and culture research, theoretically and empirically, and generate novel insights about both phenomena.

Paper 1 describes how leader-unit interactions foster culture emergence. I integrate insights from social learning theory, self-regulation theory, and event-structure theory to enumerate how leader-unit interactions create values, beliefs, and underlying assumptions that become shared among members in a nascent work unit.

Paper 2 integrates team motivation theory with multilevel leadership theory to address CEO task leadership's paradoxical effect on firm performance through intervening social (i.e., organizational culture) and psychological (i.e., TMT engagement) mechanisms. Using data from 106 CEOs and 324 top management team members, structural equation modeling results revealed that CEO task leadership enhanced firm performance through its positive association with task culture, which in turn was positively related to TMT engagement, which positively contributed to firm performance. Conversely, CEO task leadership hindered firm performance through its negative, direct effect on TMT engagement.

Paper 3 integrates various approaches to organizational culture bandwidth that have produced a fragmented view of culture and its effects on organizational outcomes. I draw upon organizational culture theory and bandwidth theory to examine the incremental predictive validity of culture configurations and culture dimensions on broad and narrow criteria. Hierarchical linear regression analyses, from data consisting of 567 employees in 130 bank branches, indicated that narrow culture dimensions predicted variance in narrow outcomes whereas configurations explained incremental variance in broad outcomes above and beyond culture dimensions.

Through this dissertation, I take an initial step toward illuminating the interrelationship between leadership and culture by identifying mechanisms through which unit leaders foster culture emergence and by examining how organizational culture is a social normative lens through which followers filter leader behavior. Given culture's importance to leadership and organizational outcomes, the conditions in which culture should be examined as a broad or a narrow phenomenon are also enumerated.

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Organizational culture is composed of shared values, beliefs, and assumptions, and its rich historical roots lie within anthropological (Geertz, 1973; Mead, 1949; Schein, 1985), sociological (Durkheim, 1965), and social psychological (Festinger, 1957) research traditions. Pettigrew (1979) integrated these perspectives to introduce the notion that organizational culture is an instrumental component of organizational functioning. Building upon Pettigrew's seminal contention, Barney (1986) proposed that culture can be a source of sustainable competitive advantage. Meta-analytic findings empirically supported these assertions by demonstrating a positive association between organizational culture and desirable unit outcomes such as employee attitudes, operational effectiveness, and financial performance (c.f., Hartnell, Ou, & Kinicki, 2011). Given culture's integral theoretical and empirical role in organizational functioning, it is imperative to understand how culture emerges within organizations.

Culture emergence is defined as a process that creates consensus or agreement about unit values, beliefs, and assumptions. Once consensus exists, culture becomes a property of the collective and is no longer an emergent phenomenon. Surprisingly, a dearth of attention has been directed toward unfolding the culture emergence process. This is an important theoretical gap in the literature because an understanding of the emergence process helps to illuminate how and why culture is a social control mechanism that guides and

directs employee behavior (O'Reilly & Chatman, 1996). Moreover, the process by which culture emerges yields practical insight into how leaders create, maintain, and change culture (Ostroff, Kinicki, & Tamkins, 2003; Trice & Beyer, 1991).

Historically, researchers have endeavored to elicit organizational culture's content and function (Hatch, 1993; Schein, 1985; Trice & Beyer, 1991; 1993) while devoting limited attention to postulating how culture emerges, or comes to exist. On a broad level, Hatch (1993) applied a symbolic-interpretive perspective to depict how individuals interpret culture as a dynamic process. Relatedly, Trice and Beyer (1993) argued that individuals use sensemaking processes to interpret a unit's values, beliefs, and assumptions. These perspectives, however, "do not specifically explain how a shared view of an organization's culture is formed by the interactions of various role holders" (Ostroff et al., 2003: 580).

Culture theory thus appears to be under developed due to conceptual ambiguity that persists around how units develop consensus about values, beliefs, and assumptions. I aim to address this theoretical gap by elucidating how leaders' and unit members' regulatory behavior as well as leader-unit interactions propagate culture consensus. The interaction between leaders and their units is a formative aspect of culture emergence because culture is learned socially over time through leader-unit interactions (Denison, 1996; Schein, 2010). Moreover, leaders are pivotal in the genesis of unit culture because of their prominent role in directing and coordinating unit members' collective effort (Bass & Avolio, 1994; Schein, 2010; Trice & Beyer, 1991).

My overriding goal in this paper is to explicate how interactions between leaders and their unit members influence the culture emergence process, ultimately resulting in culture consensus. I integrate insights from social learning theory (Bandura, 1977), self-regulation theory (Carver & Scheier, 1998; Klein, 1989), and event-structure theory (Allport, 1954; 1955) to illuminate the process by which unit members develop consensus about unit values, beliefs, and assumptions. Social learning theory describes two key types of learning that are essential for culture emergence. Self-regulation theory extends this discussion by articulating how leader and unit behavior influences learning and norm formation. Finally, event-structure theory illustrates how repeated interactions produce culture emergence over time. Taken together, these three complementary theoretical perspectives shed insight into how culture emerges.

Developing a theory of culture emergence contributes to the literature in three ways. First, I identify the underlying processes by which unit members develop a shared assessment of unit values, beliefs, and assumptions. Deciphering these processes is expected to spawn future research into the emergence process and into ways leaders can methodically create, maintain, and change organizational culture (Trice & Beyer, 1991). Second, I extend Schein's (2010) seminal work on leadership and culture in two ways. I first integrate leader behaviors that are cultural embedding mechanisms into a regulatory framework and further describe how these behaviors are an important source of learning. I then consider how leader-unit *interactions* foster culture consensus. This model thus provides a new, theoretically derived perspective for examining

culture formation (cf., Schein, 2010) and offers a set of testable propositions for consideration in future research.

The third contribution involves describing the temporal process by which culture emerges. Several researchers have highlighted the need to discuss temporal issues within organizational theories (Ancona, Goodman, Lawrence, & Tushman, 2001; Bluedorn, 2002), but temporality has not been addressed adequately in culture research despite the fact that culture emerges over time (Ostroff et al., 2003). Although a growing literature exists detailing how unit members' perceptions about time are a cultural dimension (Bluedorn, 2000; Hall, 1959; Schein, 2010), I incorporate time into a theory of culture emergence by considering how the emergence process unfolds as a system of leader-unit interactions. Event-structure theory (Allport, 1954, 1955) provides the theoretical insight to articulate how repeated interactions cultivate unit members' consensus about unit culture.

In the following sections, organizational culture is defined, the level of analysis is specified, and interactions as a source of emergent phenomena are reviewed. I then introduce the theoretical model of culture emergence and describe the mechanisms that propagate shared values, beliefs, and assumptions. I conclude by discussing theoretical implications and directions for future research.

CULTURE DEFINTION, LEVELS OF ANALYSIS, AND INTERACTIONS

Culture Definition

Culture is defined as "a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 2010: 18). Culture is often confused with related concepts such as organizational climate despite explicit attempts to identify their theoretical similarities and differences (Denison, 1996; Ostroff et al., 2003; Zohar & Hofmann, in press). Perhaps one reason for the conceptual lack of clarity is that culture and climate both illuminate how organizational members derive meaning from their work environments (Denison, 1996). Nonetheless, key differences exist that differentiate organizational culture from climate.

Culture reflects the deep, underlying components of the social context. That is, culture consists of shared norms, values, beliefs, and assumptions (O'Reilly & Chatman, 1996; Schein, 2010). In contrast, organizational climate is characterized by more readily observable aspects of the social context. Climate represents the shared perceptions of policies, practices, and procedures that direct employees' attention to behavior that is expected and rewarded (Kuenzi & Schminke, 2009; Schneider, 1990). In sum, culture is a broad construct that encapsulates artifacts, values, beliefs, and underlying assumptions that influence employees' effort (Schein, 2010), and climate is a surface manifestation of organizational culture (Zohar & Hofmann, in press). Culture thus explains the

why of employee behavior whereas climate informs the *what* of organizational culture (Ostroff et al., 2003).

Levels of Analysis

Nearly all organizational culture definitions specify that it is shared among unit members and is a property of the collective (c.f., Ashkanasy, Broadfoot, & Falkus, 2000; Glisson & James, 2002; Hartnell et al., 2011). Trice and Beyer (1993: 83) note that "the persistence of cultural forms and ideologies after their originators are gone is evidence that cultures have collective properties that are not reducible to individuals." Organizations and work units are, therefore, the appropriate levels of analysis in culture research[1] (Glisson & James, 2002).

Although researchers have predominantly theorized about organizations' holistic cultures, it is important to investigate how culture emerges at lower levels in the organization (e.g., divisions, departments, teams, etc.). Work units are a beneficial context to explore culture emergence because cultures can manifest within organizations as differentiated subcultures (Martin, 2002; Sackmann, 1992; Van Maanan & Barley, 1985). Subcultures are especially prevalent in large organizations where work units have substantively different goals (Schein, 2010). That is, business units, divisions, departments, and teams within these organizations develop diverse values, beliefs, and assumptions about how to attain their unique goals. Unit members are thus more likely to agree with each other about their unit's values, beliefs, and assumptions because instructions and expectations surrounding unit goals are more specific and unambiguous than broader organizational directives (Hartnell & Walumbwa, 2011). It is important

to note that culture formation within work groups is not independent of the organizational context. In fact, one of the unit leader's roles is to create consistency between the unit's values, beliefs, and assumptions and those of the broader organization. While this dependence may wield greater influence on the content of work units' culture, it may be less influential in culture emergence, or the process by which unit members' agree about unit culture.

Building theory about culture emergence in work units provides the theoretical components upon which future work can develop a gestalt theory of organizational culture. This conclusion is consistent with Schein's (2010) assertion that organizational culture is a compilation of organizations' work unit subcultures and Morgeson & Hofmann's (1999) proposition that organizational constructs (i.e., organizational culture) are composed of interactions within and among units (i.e., subcultures). To be clear, interactions between units are not considered here because organizations have additional layers of complexity that are not manifested within work units (Schein, 2010). Rather, I aim to develop culture theory by explicitly examining the culture emergence process where consensus is most likely to occur, *within* work groups. I thus attempt to explain how the interaction between leaders and their work units develop consensus about a unit's values, beliefs, and assumptions.

Interactions as a Source of Consensus

Within work units, interactions are fundamental to understanding how consensus about values, beliefs, and assumptions become shared. Morgeson and Hofmann (1999: 253) cogently note, "by examining the systems of interaction

among organizational members and the processes that underlie these interactions, one can understand how and why collective constructs emerge."

Interactions describe the process by which individuals' cognitions, affect, and behavior become shared (Kozlowski & Klein, 2000). Communicating, collaborating, sharing feelings, and exchanging resources streamline members' cognitions, affect, and behavior. These behaviors generate consensus among unit members because repeated social interactions develop common ways of thinking (Harris, 1994). For instance, shared behavioral expectations emerge when members share experiences within the group (Bettenhausen & Murnighan, 1985). Common experiences provide similar cues that induce members to reformulate their individual perceptions about the group situation and forge increasingly compatible views about expected and accepted behavior.

Communication also can influence unit members to adopt common cognitive frameworks, resulting in shared viewpoints (Weick, Sutcliffe, & Obstfeld, 1999). Barker (1993) poignantly illustrated how communication among members of self-managed teams was central to the emergence of shared values. Communication enabled members to "negotiate value consensus" and prioritize which values take precedence in a given situation (Barker, 1993: 424). Moreover, unit members jointly define the unit's boundaries and collectively make sense of their situation in an effort to reduce members' anxiety and uncertainty (Schein, 2010). These unit member interactions further propagate shared thought patterns and normative expectations.

Beyond interactions among unit members, culture emerges from formally designated leaders' behavior (Ostroff et al., 2003). Bowen and Ostroff (2004) postulated that the strength of unit members' shared perceptions about an HRM system depends on distinctive and consistent information. Leaders are a source of distinctive and consistent stimuli that propagate agreement among unit members about the unit's values, beliefs, and assumptions. Unit leaders are distinctive unit members because they are highly visible, have formal authority, and have the ability to assist the unit in attaining its goals (e.g., coaching, performing unit tasks, etc.). Distinctive leaders are culture creators, or culture architects, because they plan, direct, monitor, and evaluate unit members' behavior in an effort to attain unit outcomes (Trice & Beyer, 1991). These leader behaviors are particularly distinctive in newly formed workgroups[2] because unit members are learning how to perform tasks and coordinate unit effort. Leaders become a salient source of information in this context as unit members collectively determine how to solve problems associated with external adaptation and internal integration. Newly formed workgroups provide a cogent boundary condition and starting point from which to examine how leader – unit interactions cultivate consensus about values, beliefs, and assumptions.

Leaders' influence in the culture emergence process is also contingent on how consistently they act toward all unit members. The second boundary condition is unit-focused leader behavior, or leader behavior directed toward the unit as a whole. Leaders are a source of consistent, unambiguous information when they express the same leadership behavior to all unit members. Leaders

certainly interact with and influence individual unit members as well, but extant research indicates that team members who receive only individual feedback focus their attention and effort on individual performance, obviating the need for cooperation, communication, and coordination – key components for shared perceptions to emerge (DeShon, Kozlowski, Schmidt, Milner, & Wiechmann, 2004; Wang & Howell, 2010). Conversely, unit-focused leader behavior directs effort and attention to unit outcomes (Wu, Tsui, & Kinicki, 2010). Unit-focused leadership directs unit members' attention to unit processes, thereby cultivating shared perceptions about the unit's values, beliefs, and assumptions. Distinctive and behaviorally-consistent leaders are thus a key input into understanding culture emergence.

MODEL OF CULTURE EMERGENCE

Culture is learned over time (Schein, 2010) and is a product of both vicarious and experiential learning. Figure 1 incorporates both sources of learning into a model of culture emergence whereby culture emerges from leader regulatory behavior, unit members' collective regulatory behavior, and leader-unit interactions. I first describe how leader behavior produces vicarious learning (Bandura, 1977) and vicarious norms. I then examine how unit behavior fosters experiential learning, shared mental models, and experiential norms. Finally, I address how vicarious and experiential norms lead to leader-unit interactions that produce convergent perceptions about unit values, beliefs, and assumptions. Figure 1 is intended to lay a broad, conceptual framework for the process underlying culture emergence. For now, I introduce the formative inputs that

enable unit members to attain consensus about unit values, beliefs, and assumptions. I then consider the mechanisms through which leader and unit behavior produce learning as well as how leader-unit interactions propagate culture consensus in further detail after providing an overview of Figure 1.

Insert Figure 1 about here

I begin by clarifying the differences among three key variables within the emergence process. Norms are shared behavioral expectations (Bettenhausen & Murnighan, 1985; Feldman, 1984) and shared mental models represent shared task-specific knowledge (Cannon-Bowers & Salas, 2001; Cannon-Bowers, Salas, & Converse, 1993; Mohammed & Dumville, 2001). Whereas norms have a behavioral focus and shared mental models are primarily cognitive, culture is a broader construct that encapsulates shared behavioral expectations and cognitive representations. Norms and shared mental models thus represent components of culture.

Leader Regulatory Behavior

Figure 1 illustrates that leader regulatory behavior is an important facet of culture emergence. Leader regulatory behavior comprises planning, organizing, monitoring, evaluating, and correcting unit behavior to accomplish unit goals. It is a distinctive source of information that influences vicarious unit norms. Vicarious norms refer to behavioral expectations that unit members' learn by listening to leaders and observing their behavior. Leaders' explicit statements directly develop vicarious norms because they facilitate task success, increase the

predictability of unit members' behavior, define members' role expectations, and reaffirm desired unit values (Feldman, 1984).

Leaders also indirectly influence vicarious unit norms through unit members' vicarious learning. Bass and Avolio (1994: 543) denote, "cultural norms arise and change because of what leaders focus their attention on, how they react to crises, the behavior they role model, and who they attract to their organizations." Schein (2010) further underscores that leaders embed their values, beliefs, and assumptions into the fabric of unit behavior through what they pay attention to, role modeling, how they structure roles and responsibilities, and how they allocate rewards. These conclusions are consistent with Dick Brown's, the former CEO of EDS, beliefs about organizational culture. He stated, "The culture of a company is the behavior of its leaders. Leaders get the behavior they exhibit and tolerate" (Bossidy & Charan, 2002: 105). Unit members thus learn vicariously from observing leaders' actions.

Unit members' collective vicarious learning subsequently translates into shared, vicarious normative expectations. For example, unit members emulate leaders' behavior because they infer that the leader behavior is acceptable, desirable, and will translate to desirable unit outcomes. Unit members who mimic leader behavior have a greater degree of surety about what leaders expect of them and, by extension, what unit members should expect of each other. In support, Feldman (1984) notes that leader behavior increases certainty among unit members about what is expected, thereby fostering the development of vicarious unit norms.

Consistent with these views of leadership and norm formation, leaders' behavior informs unit members about leaders' values, beliefs, and assumptions and establishes shared expectations that guide and normalize unit behavior. Although vicarious norms are an important ingredient to culture emergence, they must be integrated into unit members' collective experience to produce shared unit values, beliefs, and assumptions. Hence, I posit that vicarious norms are a necessary but not sufficient ingredient for culture emergence. Another necessary ingredient, experiential norms, and the regulatory behavior by which they are created, are now considered.

Unit Regulatory Behavior

Unit regulatory behavior, or unit behavior directed toward attaining and maintaining unit goals, is an important input into culture emergence because it produces experiential learning and shared mental models (see Figure 1). Unit members' regulatory behavior generates experiential learning because members discover firsthand what behavior helps or hinders the unit's effort to accomplish its goals. Moreover, unit members who collectively monitor and assess unit behavior, and jointly solve goal-performance discrepancies develop similar mental representations of their environment (Harris, 1994, Schein, 2010; Walsh, Henderson, & Deighton, 1988; Weick & Bougon, 1986). Unit regulatory processes thus forge shared, cognitive assessments of effective unit behavior resulting in shared mental models. Experiential learning also influences the development of shared mental models because unit members experience the same situations and form collective attributions about unit goal-directed behavior.

Shared mental models are unit members' "shared, organized understanding and mental representation of knowledge about key elements of the [unit]'s relevant environment" (Mohammed, Ferzandi, & Hamilton, 2010: 879). Shared mental models specifically address the extent to which unit members have a shared understanding about information critical for goal-striving and goal acquisition rather than all possible information in the unit (Rico, Sanchez-Manzanares, Gil, & Gibson, 2008). Units whose members form shared mental models integrate effort more seamlessly and perform more effectively without the need for explicit communication (Cannon-Bowers et al., 1993; DeChurch & Mesmer-Magnus, 2010a; 2010b; Smith-Jentsch, Mathieu, Kraiger, 2005). Shared mental models lead to experiential norms because shared, situational assessments are more likely to result in consensus about normative expectations concerning future behavior (Bettenhausen & Murnighan, 1985). Experiential norms represent normative behavior that is learned as unit members actively participate in goal-directed activities and observe the consequences of those behaviors. Mohammed et al. (2010) alluded to norms as an emergent outcome from team mental models, even though scant research has explicitly considered the link between shared mental models and unit norms. The distinction between vicarious and experiential norms is helpful in the current context because they identify the source from which unit members learn behavioral expectations. This demarcation is particularly helpful as I consider the juxtaposition of vicarious and unit norms in leader-unit interactions.

Leader-Unit Interactions

Figure 1 indicates that vicarious and experiential norms culminate in culture emergence through leader-unit interactions. Interactions are the crucible within which inconsistent behavioral expectations are identified and aligned. Bilateral dialogue prompts both leaders and unit members to consider and reconsider their assumptions about how to best coordinate effort and accomplish tasks to attain unit goals. Although the supposition that social interactions tend to produce perceptual convergence is well-established, the extent to which leader-unit interactions produce consensus about values, beliefs, and assumptions, remains equivocal (Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996).

Leader-unit interactions create consensus about culture to the degree that they produce consistent, unambiguous messages about the unit's values, beliefs, and assumptions (Bowen & Ostroff, 2004). Interactions juxtapose unit members' vicarious norms with experiential norms. Unit members develop consensus about unit values, beliefs, and assumptions when vicarious and experiential norms are aligned, or yield consistent information about desired unit behavior. Consider, for example, the extent to which unit members in newly formed work units comply with vicarious norms. Unit members integrate leaders' input into their daily goal-directed activities and test the validity of vicarious norms through experiential behavior. As vicarious norms produce promised effects, unit members integrate them into shared mental models and experiential norms. Alignment between vicarious and experiential norms send clear, consistent information to unit members about values, beliefs, and assumptions, fostering culture emergence. In

contrast, vicarious norms that are inconsistent with experiential norms (i.e., that do not produce the promised effects) send conflicting messages about how to solve problems related to unit functioning (Bowen & Ostroff, 2004), thereby impeding culture emergence.

Proposition 1: Leader-unit interactions influence culture consensus by creating alignment between vicarious unit norms and experiential unit norms.

Taken together, Figure 1 illustrates how leaders' and unit members' regulatory behavior, as well as leader-unit interactions, formulate a gestalt perspective of how to perceive, think, and feel in relation to unit problems. I now turn our attention to self-regulation theory to explain the behavioral mechanisms by which these components contribute to culture emergence.

SELF-REGULATION THEORY

Self-regulation theory is a motivational theory that describes the process through which individuals attain and maintain goals (Carver & Scheier, 1998; Vancouver & Day, 2005). Behavior regulation is a cyclical process in which individuals perform, monitor their performance, compare their performance against goals, and modify their goals, attitudes, or behavior to reduce discrepancies between the goal and perceived performance (Bandura, 1991; Lord, Diefendorff, Schmidt, and Hall, 2010; Wood & Bandura, 1989).

Although self-regulation theory has been traditionally applied to how individuals formulate goals and regulate effort toward their achievement, teams theory suggests that work units undergo similar regulatory processes such as

mission analysis, goal specification, strategy formulation, and monitoring progress toward goals (Marks, Mathieu, & Zaccaro, 2001). In support, DeShon et al. (2004) reported that team regulatory processes (i.e., team goals, team goal commitment, team efficacy, team strategy, & team-focused effort) are functionally isomorphic to comparable individual self-regulatory processes. Subsequent research has similarly indicated that teams undergo the same regulatory processes as do individuals (Chen, Thomas, & Wallace, 2005).

In line with these findings, I apply self-regulation theory to explore how unit regulatory processes promote culture emergence. In addition to units' self-regulatory processes, leaders regulate unit behavior. Unit leaders have a significant stake in their unit's activities because leaders are assessed, in part, based on unit performance. Leaders thus develop attitudes, beliefs, and expectations about what unit members should do and how they should do it (Katz & Kahn, 1978; Lord & Hanges, 1987). Leaders implicitly and explicitly communicate their expectations as they formulate unit goals, design unit structure, monitor unit behavior, and detect and reduce discrepancies to ameliorate unit performance. Hence, units undergo dual regulatory processes whereby both leaders and unit members simultaneously monitor and influence subsequent unit behavior to reduce performance discrepancies and attain unit goals. Figure 2 depicts the leader-unit dual regulatory processes.

Insert Figure 2 about here

The leader-unit dual regulatory processes are important to enumerate because they are the genesis of culture emergence. That is, regulatory processes specify behavior that unit members observe and experience as they solve problems related to external adaptation and internal integration. These observations and experiences generate shared, behavioral expectations that become aligned during repeated leader-unit interactions, thus producing consensus about unit values, beliefs, and underlying assumptions. Leader-unit dual regulatory processes are, therefore, a source of culture consensus.

I organize my discussion of the dual regulatory processes into three components. First, I provide an overview of the process leaders use to regulate unit behavior. I then discuss how leaders embed their values, beliefs, and assumptions into the work unit throughout the regulatory process. Third, I explicate how unit regulatory behaviors propagate experiential learning and shared mental models, key mechanisms through which experiential unit norms are established.

DUAL REGULATORY PROCESSES AS A SOURCE OF CULTURE CONSENSUS

Leader Regulatory Process

Formulating unit goals. Leaders are formative in constructing units' goals because they translate broad, formally-stated organizational directives into relevant unit goals (see Figure 2; Fleishman, et al., 1991; Hartnell & Walumbwa,

2011). These goals guide and focus unit members' behavior. Consistent with individual-level applications of goal-setting theory (Locke & Latham, 1990), clear unit goals streamline members' attention and effort toward unit-focused outcomes (Hu & Liden, in press). They also represent a shared platform for unit members to forge a common identity (Sivunen, 2006). Unit goals thus direct unit members' attention to what is important, valued, and rewarded.

Structuring unit roles & procedures. Figure 2 indicates that once goals are established, leaders structure unit behavior. Whereas goals inform unit members *what* they should do, structure cues members about *how* to accomplish unit goals. Structuring includes assigning members' roles and responsibilities, instituting policies and procedures, and acquiring the resources needed to achieve unit goals. It serves two primary purposes. First, structuring clarifies how unit members should cooperate and coordinate to attain unit goals (Morgeson, DeRue, & Karam, 2010). That is, leaders disseminate how unit members should collectively contribute and organize their interdependent effort as a means to accomplish goal-related ends. Second, structuring reduces unit members' anxiety and ambiguity because it lends predictability to unit member interactions. In support, Hu and Liden (in press) reported that process clarity was significantly related to team potency and team effectiveness.

Monitoring unit performance. Monitoring performance is associated with the extent to which someone is keeping track of and regulating performance information, such as levels of quality, accuracy, timeliness, prioritization and accomplishment of tasks/goals. Monitoring can be viewed as the heart of the

regulation process (cf., Cardy, 2004) because it is the key antecedent to discrepancy detection and helps distinguish different levels of unit effectiveness (Komaki, 1986) by ensuring that consequences are contingent on performance. Leaders monitor unit performance by observing unit member interactions, processes, and collecting data on members' productivity and efficiency.

Discrepancy detection. Once leaders gather information about unit behavior, they evaluate it. Information evaluation occurs when acquired information is compared against a valued standard to detect discrepancies. Leaders detect discrepancies by comparing results against the benchmarks of specific goals and behavioral styles. Goals and behavioral styles are both important comparators that aid leaders in detecting discrepancies because specific goals delineate *what* unit members should do and behavioral styles inform unit members *how* they should go about accomplishing unit goals. For example, a discrepancy would exist if a unit goal was to increase sales by 10% and it only increased by 3%. Similarly, a discrepancy would be noted if leaders advocated accomplishing unit goals through collaboration, communication, trust, and support and unit members were observed being competitive and withholding information from each other. Leaders thus compare unit behavior with established unit goals and desired behavioral styles to detect discrepancies.

Discrepancy reduction. The final regulatory process component, discrepancy reduction, describes efforts in which leaders aim to reduce the gap between current and desired behavior. As illustrated by the two feedback loops originating from leader discrepancy reduction in Figure 2, leaders directly narrow

units' goal-performance discrepancies (GPDs) by reformulating unit goals and influencing unit behavior.

Leaders reformulate unit goals when conflicting goals cause performance discrepancies. Units frequently pursue multiple goals concomitantly (Locke & Latham, 2002; Schmidt & DeShon, 2007; Schmidt & Dolis, 2009; Vancouver, Weinhardt, & Schmidt, 2010). For example, competing unit goals may include customer service and productivity. Excellent customer service may require increased time with customers and attention to their needs and concerns. Customer service can therefore come at the expense of unit productivity and efficiency. If leaders genuinely value customer service, the discrepancies between the unit's actual and desired productivity may be acceptable. Hence, leaders may not be concerned with discrepancies on goals that they perceive are less central to the units' vitality. Instead, they may downwardly revise less important goals to eliminate the GPDs caused by competing priorities.

Other than modifying unit goals, leaders influence unit behavior through behavioral modeling (Bandura, 1997; Wood & Bandura, 1999). Behavior modeling encompasses leader behavior such as performing unit tasks, coaching, and providing performance feedback. The purpose of behavioral modeling is to teach unit members how to effectively attain unit goals. Unit members learn vicariously by observing leaders performing tasks. Coaching and feedback, on the other hand, promote both vicarious and experiential learning. They foster bidirectional communication in which unit members iteratively interact with their leaders as they receive instruction, seek clarification, and act on the information.

I discuss coaching and feedback at a later point when I explore leader-unit interactions and the reciprocal interplay between leaders and unit members. For now, I describe how leaders reduce unit GPDs by directly performing unit tasks.

Leaders who perform unit tasks translate their knowledge, skills, and experience into poignant, tangible examples in an effort to teach unit members how to accomplish tasks effectively. These leaders model desired behavior to enhance unit effectiveness. Leaders who participate in and perform unit task work gain increased credibility among unit members because they understand operational problems from the unit members' perspectives and translate solutions into readily implementable terms. Social learning theory advocates that "those with high status, competence, and power are more effective in prompting others to behave similarly than are models of lower standing" (Bandura, 1977: 88). Leader behavioral modeling is effective in altering unit behavior because unit members perceive that emulating the behavior of credible and attractive role models will result in valued outcomes. Unit members are thus more attentive to observing, retaining, and implementing modeled leader behavior when they perceive their leaders to be competent and able to positively impact unit outcomes. This conclusion is consistent with research indicating that employees more readily accept feedback from credible sources (Kinicki, Prussia, Wu, & McKee-Ryan, 2004).

Leader Embedding Mechanisms

Unit members learn vicariously about unit values, beliefs, and assumptions through observing their leader's actions (Bandura, 1977; Schein,

2010). The previously discussed leader regulatory behaviors are prominent actions that influence unit members' perceptions about what is expected, valued, and rewarded. Each leader behavior transmits information concerning how unit members ought to perceive, think, feel, and behave, thus influencing members' perceptions of unit culture. Schein (2010) enumerates twelve mechanisms through which leaders embed, or teach unit members about culture. An exhaustive analysis of how leaders use each of these twelve embedding mechanisms throughout the regulatory process is beyond the scope of this paper. Instead, I limit my focus to four leader behaviors that cogently depict how unit members in nascent work groups learn vicariously about desired values, beliefs, and assumptions: (1) what leaders pay attention to, measure, and control, (2) deliberate role modeling, (3) how leaders structure roles, responsibilities, policies, and procedures, and (4) how leaders allocate rewards (Schein, 2010). I now consider how unit members learn about desired values, beliefs, and assumptions from these four embedding behaviors within the leader regulatory process.

Formulating unit goals. Unit members learn what is valued by observing what goals are established (i.e., content or substance) and how they are established (i.e., style). Goal content is an important signal to unit members about what leaders value because it is a tangible manifestation of what leaders pay attention to, measure, and control. Schein (2010) underscores the importance of leaders' consistent attention to units' goals because it provides reliable information about how unit members should direct their effort. In contrast, if leaders "are inconsistent in what they pay attention to, subordinates and

colleagues will spend inordinate time and energy trying to decipher what a leader's behavior really reflects and will even project motives onto the leader where none may exist" (Schein, 2010: 237). Leaders thus teach members about valued behavior when they consistently draw unit members' attention to unit goals (e.g., safety, innovation, efficiency, etc.) and when they reward their accomplishment (Zohar & Luria, 2004).

Rewards send powerful messages about unit values. Making rewards contingent on goal achievement sends compelling cues about behavior that is desired and supported. Congruence between goal accomplishment and rewards provides continuity and consistency about unit values, beliefs, and underlying assumptions. In contrast, gaps between goal achievement and members' rewards (i.e., goals that are not rewarded) provide ambiguous messages about leaders' expectations, which in turn tends to reduce consensus about beliefs, values, and basic underlying assumptions (Schein, 2010).

Unit members also learn about leaders' values, beliefs, and assumptions by observing the leader's style when establishing unit goals. Leadership styles communicate additional information to unit members about leaders' values through role modeling. For example, autocratic leaders may unilaterally set goals without group members' input, thereby modeling allegiance to authority and experience. In contrast, relational, or democratic, leaders are more likely to encourage unit members to participate in goal setting. This leader behavior is modeling collaboration, cooperation, and consideration. Both leadership styles give stark signals to unit members about leaders' values, beliefs, and normative

expectations. In a classic study of leadership and group functioning, for example, Lewin, Lippitt, and White (1939) reported that group member hostility was 30 times greater in groups with autocratic leaders than in groups with democratic leaders. Moreover, leadership styles were found to cascade across organizational levels of management (Chun, Yammarino, Dionne, Sosik, & Moon, 2009), further supporting the notion that followers observe leader behavior and interpret it as an appropriate way to act toward others. Leadership styles thus teach unit members about valued and accepted behavior that subsequently inform unit members' interaction. Taken together, unit members gather information about unit values, beliefs, and assumptions, through observing what leaders pay attention to, how leaders distribute rewards, and what leadership styles are modeled while formulating unit goals.

Structuring unit roles & procedures. Roles, policies, and procedures are a salient source of information to unit members about what is valued and expected. The unit's structure reveals leaders' beliefs about how to best organize employees to attain unit goals. For instance, leaders who believe they have the most insight to make the best decisions to accomplish unit goals and should maintain control over unit processes structure members' roles, unit policies, and procedures hierarchically. Conversely, leaders who believe that unit members have ample knowledge and expertise to proactively identify challenges and meet unit goals structure members' roles, unit policies, and procedures in a decentralized manner. These examples underscore the notion that leaders institutionalize their values by prescribing members' roles as well as unit policies,

practices, and procedures (Dickson, Smith, Grojean, & Ehrhart, 2001). Stated differently, leaders create climates that attune unit members to the leaders' underlying values, beliefs, and assumptions (Kozlowski & Doherty, 1989; Naumann & Bennett, 2000). Climates "formalize the process of 'paying attention' and thus reinforce the message that the leader really cares about certain things" (Schein, 2010: 253). In sum, a leader's structuring behavior codifies his/her values, beliefs, and assumptions within the work unit and illuminates to unit members appropriate and acceptable ways to attain unit goals.

Monitoring unit performance. Leaders' underlying beliefs about the *most important* team processes and goals manifests in what they pay attention to, measure, and control. For example, leaders who believe that teams are effective when unit members' believe that they have the skills and competency necessary to accomplish their tasks (Bandura, 1997; Prussia & Kinicki, 1996) are more attentive to unit motivational processes. In this context, a leader would display their attentiveness by encouraging continuous training as well as inquiring about unit members' skills, aptitude, and knowledge deficiencies as they pertain to the unit's cumulative ability to accomplish its task. Unit members subsequently learn that their leaders value collective efficacy because the leaders believe that motivational processes are critical to team effectiveness. Hence, what leaders monitor is a salient source of information to unit members about core values, beliefs, and assumptions.

Discrepancy detection. Leaders reinforce desired unit goals (e.g., What should I do?) and behavioral styles (e.g., How should I do it?) through

consistently measuring, evaluating, and rewarding behavior related to them. For example, leaders develop metrics based on the unit's roles and responsibilities to ensure that unit members meet deadlines, produce products with acceptable quality, and work quickly and efficiently. Leaders also evaluate collective attitudes and behaviors and compare them with their normative behavioral expectations (e.g., does the unit exhibit teamwork, collaboration, commitment, etc.?). During the discrepancy detection process, leaders reward desirable behavior through valued currencies such as verbal encouragement, celebrations, time off, or extra monetary remuneration. Unit members thus learn about values, beliefs, and assumptions, by observing what leaders attend to as well as what they reward in the process of identifying performance discrepancies.

Discrepancy reduction. Unit members also gain clarity about values, beliefs, and assumptions as they observe how leaders reduce performance discrepancies within the unit. The three focal embedding mechanisms through which unit members learn vicariously about unit culture are what leaders pay attention, measure, and control, how leaders allocate rewards, and leader role modeling.

Unit members learn about leaders' core values when goals conflict because they observe what leaders consistently pay attention to, measure, and control (Schein, 2010; Zohar & Hofmann, in press). Leaders, for instance, may monitor unit members' customer service more closely than unit efficiency because service performance has implications for customer retention, unit sales, and profitability (Liao & Chuang, 2004; 2007; Chuang & Liao, 2010). How

leaders divide their attention among competing priorities provides additional information for unit members to discern *enacted* values, or values that are actually prioritized and reinforced by leader behavior, from *espoused* values, or formally dictated values. Espoused and enacted values enable unit members to decipher relative priorities and determine how to allocate their effort accordingly. Unit members thus form common evaluations of the leader's behavioral expectations by observing how leaders allocate attention among competing goals.

Rewards similarly imbue priorities among competing goals. Consider, for instance, that unit members' excellent customer service may be accompanied by future pleasant customer interactions, customer loyalty, unit accolades and awards, customer referrals, and an increase in sales (Chuang & Liao, 2010; Liao & Chuang, 2007; Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005). Goals related to unit productivity and efficiency, however, may simply be expected and not rewarded beyond unit members' existing financial compensation. Consequently, unit members further learn about the unit's core values, beliefs, and assumptions through identifying the intrinsic and extrinsic rewards associated with competing goals.

Leaders who participate in unit tasks serve as deliberate role models and embed their underlying values, beliefs, and assumptions within the unit by signaling what tasks are important to unit effectiveness. Leader role modeling demonstrates leaders' implicit values and beliefs about how tasks should be executed to ameliorate unit performance. It is a particularly influential embedding mechanism because unit members not only observe, but emulate

attractive and credible role models (Waldman & Yammarino, 1999). Unit members who reproduce leader behavior implicitly adopt their leader's values, beliefs, and assumptions, and maintain the value set until the behavior ceases to result in desirable outcomes (Schein, 2010). Beyond role modeling, leaders also directly modify unit behavior through reallocating rewards. The adjusted reward structure redirects unit members' attention to behavior that is desired and supported.

Based on the preceding discussion, I propose that all five leader regulatory behaviors noted in Figure 2 are important components of culture emergence.

Proposition 2: Leader behaviors underlying the regulatory process are drivers of culture emergence.

Leaders, as culture architects, are clearly an important source of unit members' vicarious learning and vicarious norms. As depicted in Figure 1, however, vicarious learning alone does not fully account for how culture emerges. Experiential learning is also a key determinant for culture formation. I now turn our attention to how units learn experientially through unit regulatory processes.

Unit Regulatory Process

Recall that unit regulatory processes (as illustrated in Figure 2) are isomorphic to individual regulatory processes (DeShon et al., 2004). Rather than reviewing research on how unit members collectively regulate (c.f., Chen et al., 2005; DeShon et al., 2004), I consider how unit members' regulatory behavior results in experiential learning, shared mental models, and experiential norms because these elements are necessary ingredients for unit members to converge on

a common set of values, beliefs, and assumptions. Before elucidating how unit regulatory processes create shared situational assessments and normative expectations, it is important to establish that unit regulatory processes are a function of frequent unit member interactions.

Unit regulatory processes (e.g., monitoring performance, detecting discrepancies, reducing discrepancies, etc.) require members to interact with each other to determine how they should collectively strive toward and accomplish unit goals. Unit members interact during the regulatory process as they share information, analyze and integrate individual perspectives, and assimilate them into an agreed-upon course of action; these interactions produce convergent situational assessments and normative expectations.

Unit members share information as they act, monitor their collective efforts, and detect performance discrepancies. Members "learn by doing" and gain experiential knowledge about what works. They derive ideas from experiential feedback and then interact to identify successful behavior and formulate better ways to accomplish unit goals. These interactions foster units' experiential learning and generate similar cognitive frameworks about how to identify and define unit problems. Once unit members detect discrepancies and generate plausible solutions, they jointly assess and integrate individual perspectives to reduce performance discrepancies. Unit members collectively process information (e.g., share and integrate insights) to foster agreement, or a shared understanding, about the most attractive alternative (Cannon-Bowers et al., 1993; Rentsch & Hall, 1994; Walsh et al., 1988). Unit members who accumulate

information, analyze it, and collectively process it with their colleagues, are well-positioned to assimilate multiple members' insight and create a shared understanding about information, resulting in shared mental models (Blickensderfer, Cannon-Bowers, & Salas, 1997). Shared mental models subsequently organize, structure, and pattern future unit behavior and become informally codified into normative expectations. Taken together, unit regulatory behavior describes the process through which unit members learn experientially (Edmondson, 1999; Gibson & Vermeulen, 2003), build shared mental models, and develop normative expectations for behavior that results in desired outcomes.

Proposition 3: Unit behaviors underlying the regulatory process are drivers of culture emergence.

Both leader and unit regulatory processes and the learning they induce propagate behavioral expectations that guide unit members' behavior (see Figure 1). Consistent vicarious and experiential norms create fluid leader-unit interactions, resulting in convergent perceptions about the unit's values, beliefs, and assumptions. Inconsistent messages, however, create ambiguity about what is valued, rewarded, and supported. I propose that leader-unit interactions are key factors that reduce these discrepancies and cultivate culture emergence.

LEADER – UNIT INTERACTIONS

Leader-unit interactions have both behavioral and temporal properties. The behavioral nature focuses on how leaders' and unit members' behavior initiates interactions to produce consistency. Interactions also have a temporal quality in which interactions occur over time. Temporal considerations are

particularly important for culture emergence because leader and unit regulatory processes continuously occur over time. I now consider how behavioral and temporal aspects of leader-unit interactions foster consistency and consensus about shared values, beliefs, and assumptions.

Behavioral Leader-Unit Interactions.

Behavioral interactions align vicarious unit norms and experiential unit norms. On the surface, leader-unit interactions appear to highlight informational inconsistencies. For instance, leaders make unit members aware of their collective performance discrepancies and unit members similarly make leaders aware of unit performance discrepancies. A deeper look, however, reveals that inconsistencies are managed through the substance of leader-unit interactions, or the iterative information exchanges between leaders and unit members. Recursive leader-unit interactions produce consistent information because they clarify behavioral expectations and reduce the perceived conflict between vicarious and experiential unit norms. Leaders use two fundamental methods—coaching and feedback—to clarify and reinforce behavior that is valued, rewarded, and supported (Morgeson et al., 2010). Coaching and feedback produce consistent information because they directly clarify vicarious norms and bring experiential norms into alignment with the leader's behavioral expectations.

Definitions and operationalizations of coaching vary in terms of their breadth and bandwidth. For example, Heslin, Vandewalle, and Latham (2006) take a narrow perspective by defining coaching as "managers providing one-on-one feedback and insights aimed at guiding and inspiring improvements in an

employee's work performance" (p. 872). In contrast, Liu and Batt (2010) define coaching as a broader process "through which supervisors may communicate clear expectations to employees, provide feedback and suggestions for improving performance, and facilitate employees' efforts to solve problems or take on new challenges" (pp. 270-271). The key theme across these definitions is that coaching involves managerial behaviors aimed at improving employee performance. These behaviors might include showing employees how to complete tasks, providing appropriate resources, participating in performance problem solving, and providing direction when needed. Interactive coaching behavior clarifies vicarious norms, identifies undesirable experiential norms, and illustrates to unit members how they can bring behavior into alignment with the leader's behavioral expectations.

> *Proposition 4:* Leader-driven coaching to unit members creates consistency between vicarious unit norms and experiential unit norms, resulting in culture consensus.

Delivering performance feedback enables leaders to clarify and make normative behavioral expectations salient. Leader-generated feedback is particularly vital when leaders have ample experience and unit members collectively lack experience pursuing unit goals. Inexperienced unit members have a less developed cognitive schema about how to approach unit goals and may not fully understand and integrate their leader's behavioral expectations. Consequently, unit members may be unaware that they have formed implicit behavioral expectations that deviate from leader-induced vicarious norms.

Leaders, with their richer base of experiential knowledge, are much more attuned to discrepancies between vicarious and experiential norms than are less-experienced unit members. Leader feedback thus provides unit members with information to forge consistency between leader-induced and unit-member induced behavioral expectations.

> *Proposition 5:* Leader-driven feedback to unit members creates consistency between vicarious unit norms and experiential unit norms, resulting in culture consensus.

Unit members also initiate leader-unit interactions primarily through upward feedback. Whereas leaders provide performance-related feedback, unit members' provide operational feedback to their leaders (Katz & Kahn, 1978). Front-line unit members are optimally situated to deliver feedback to leaders because they are intricately aware of operational details and can identify when and where problems occur (Kinicki, Jacobson, Galvin, & Prussia, 2011). Leaders frequently depend on their unit members to identify these operational discrepancies because leaders' time is constrained with managerial activities, preventing them from getting involved in the minutiae of the unit's operational details. Unit members' proximity to the unit's operational details enable them to identify discrepancies between vicarious norms and experiential norms. If vicarious norms advocate behavior that helps unit members successfully carry out their functions, units create consistent experiential norms. The consistent set of behavioral expectations results in consensus about the unit's values beliefs, and assumptions. Experiential norms deviate from vicarious norms, however, when

vicarious norms promote behavior that unit members perceive to be ineffective in attaining unit operational goals. In support, Bandura (1977: 90) denotes, "a prestigious or attractive model may induce a person to try a given course of action, but if the behavior should prove unsatisfactory, it will be discarded." Unit members detect discrepancies when vicarious norms do not result in their promised effect (Bowen & Ostroff, 2004). Unit members subsequently seek consistency about what is valued by sharing discrepant information with their leader. These leader-unit interactions foster consistency when they modify leader expectations and vicarious norms or trigger leaders to engage in coaching or performance feedback to reframe the discrepancy and demonstrate how to reduce it.

> *Proposition 6:* Unit members' feedback to leaders creates consistency between vicarious unit norms and experiential unit norms, resulting in culture consensus.

Temporal Leader-Unit Interactions

Leader-unit interactions occur over time as unit members observe, internalize, and express behavior directed toward unit goals. Event-structure theory posits that systems of interaction are foundational to understanding how collective constructs emerge (Allport, 1954; 1955). Leaders' and unit members' repeated interactions generate consistency between behavioral expectations and foster consensus about appropriate ways to perceive, think, feel, and behave in relation to the unit's problems. Systems of interaction are comprised of three components: ongoings, events, and event cycles (Allport, 1967). *Ongoings*

represent leaders' and unit members' everyday activities (i.e., routine behavior). *Events* are discrete interactions between leaders and units that change unit members' routines. *Event cycles* describe the cyclical relationship between ongoings and events. That is, routines are disrupted when leaders' and unit members' interactions produce new routines. Event cycles thus represent the temporal link between ongoings, events, and subsequent ongoings. Event-structure theory illuminates *how* repeated interactions between leaders and their work units cultivate consensus about a unit's values, beliefs, and assumptions. Morgeson and Hofmann (1999: 252) aptly note, "the structure of any given collective (e.g., a work unit) can be viewed as a series of ongoings, events, and event cycles between the component parts [e.g., leaders and work units]. This structure, in turn, forms the basis for the eventual emergence of collective constructs."

Figure 3 illustrates temporal interactions from a regulatory perspective. Nascent workgroups initially encounter events as leaders define unit goals, structure members' roles, and define unit procedures, because goals and structure are the fundamental components that guide routine behavior. Unit members and leaders subsequently observe, monitor, and compare unit behavior with unit goals. These routine processes (i.e., ongoings) continue until leaders and/or unit members detect GPDs. Discrepancies trigger events whereby leaders and/or unit members determine what action should be taken to reduce the performance discrepancy. As discussed earlier, leader actions include performing tasks, providing unit resources, coaching, and delivering performance feedback to the

unit. Unit members' actions include integrating plausible alternatives into an actionable plan or delivering operational feedback to the leader. These actions and interactions inform future unit behavior and monitoring. The iterative cycle of events and ongoings (i.e., event cycles) continue as leaders and unit members regulate unit behavior.

Insert Figure 3 about here

Event cycles temporally explain how culture emerges. Figure 4 indicates that newly formed workgroups spend much more time at the outset in events than in ongoings because leaders' and their units' effort is directed more toward defining goals and determining how unit members should contribute toward goal accomplishment. Moreover, discrepancies may take much longer to resolve because leaders and unit members are attempting to coordinate and integrate members who have different backgrounds, unique ideologies, and carry behavior from past situations (Feldman, 1984) into the unit. That is, unit members in nascent groups have different mental models and normative expectations. Interactions surface many of these differences and take time to fuse them into a unified direction. Whereas events are longer in duration in the beginning of a unit's existence, ongoings tend to be short. Nascent units are surrounded by ambiguous information (e.g., what are our goals and how do we accomplish them?) that they learn to interpret over time. Ongoings are thus punctuated by frequent events (e.g., coaching and feedback) until leaders and unit members

establish a common understanding about the situation and how to behave appropriately in response to unit problems.

Insert Figure 4 about here

Proposition 7: The frequency of events is negatively associated with culture consensus. Although large amounts of information vital to unit functioning are ambiguous at the unit's inception, numerous event cycles enable leaders to pinpoint and clarify more specific pieces of unclear information. Consequently, as depicted in Figure 4, events decrease in duration and ongoings increase in duration over time as interactions produce minor, incremental adjustments in unit members' values, beliefs, and assumptions. Shorter events and longer ongoings result in less frequent event cycles. Longer ongoings provide unit members experiential evidence that increases their confidence about how their behavior is solving problems related to internal integration and external adaptation. Hence, leaders and unit members who are exposed to the same environment over time interpret it similarly and develop consistent perspectives about normative unit behavior, resulting in consensus about unit culture. As culture emerges, sustained ongoings affirm and reaffirm unit processes and are taught to new members as the correct way to perceive, think, feel, and behave, thereby maintaining unit culture (Schein, 2010; Trice & Beyer, 1991).

Proposition 8: The duration of ongoings is positively associated with culture consensus.

Proposition 9: Culture emergence occurs through a series of event cycles.

CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

An impressive body of knowledge has accumulated to define culture's content and function while concomitantly establishing its relationship with various measures of organizational performance (Hartnell et al., 2011). Given culture's importance in organizational functioning, the time is ripe to further develop theory about how culture emerges, or becomes shared among unit members. I sought to accomplish this objective by integrating insights from social learning theory, self-regulation theory, and event-structure theory to explicate how and why leader-unit interactions cultivate consensus about unit values, beliefs, and assumptions. The resulting theory provides five directions for future research.

As opposed to viewing culture emergence as a derivative of leader behavior *or* unit members' interactions (Schein, 2010), I integrated components from both lenses to formulate a dynamic conceptualization of culture formation as an iterative, bidirectional interplay between leaders *and* their unit members. Still, several unanswered questions remain. For example, if culture is learned socially over time, when are leaders or unit members relatively more influential in culture emergence? One possibility may be that leaders are more influential in highly dynamic competitive environments because the unit requires a boundary spanner to align their goals to stakeholders' needs. Another interesting question considers the degree to which different leadership styles (e.g., transformational, task, relationship, empowering, ethical, laissez-faire, etc.) influence the culture

emergence process. Do certain leadership styles accelerate or inhibit culture emergence? Future research is clearly needed to investigate these possibilities.

A second avenue for future research involves the synchronicity of the dual regulatory process model shown in Figure 2. For instance, we do not know the extent to which the dual regulatory processes are synchronous or asynchronous. Leaders and unit members may not regulate unit behavior at the same pace. Asynchronous regulatory processes would illuminate who is the most actively involved in regulating unit behavior and shed light on the degree to which leaders or unit members have a more dominant role in culture emergence. Another interesting extension could be to consider when asynchronous regulatory processes become synchronous. Regulatory processes may be asynchronous at the outset because leaders are hyper sensitive to unit behavior or unit members frequently solicit leaders' feedback and coaching to clarify ambiguous goals. Regulatory processes could become synchronous over time after a multitude of leader-unit interactions. Interactions focus leaders and unit members' attention on the same focal behavior and generate a common understanding about how to monitor the behavior. Leaders' and unit members' regulatory rhythm thus merits future consideration.

A third opportunity for future research is juxtaposing behavioral and attributional perspectives to build theory about culture strength. Culture strength refers to the degree to which unit members agree about, or consistently perceive, unit values, beliefs, and assumptions (Sorenson, 2002). My model focuses on how leader-unit behavioral interactions generate agreement among members

about unit values, beliefs, and assumptions. In contrast, Bowen and Ostroff (2004) approached consensus from a cognitive, attributional perspective in which strong agreement occurs when systems exhibit distinctiveness, consistency, and consensus (Kelley, 1967). Employees in these systems perceive and interpret messages in a common way, thus generating consensus. The behavioral and attributional perspectives are complementary lenses from which researchers can elucidate how behavioral interactions and contextual features from HR systems or organizational climates jointly contribute to strong agreement about unit culture. Integrating these two perspectives would extend the contributions of my work.

Fourth, future research is needed to build upon the current unit-level theory of culture emergence to develop a gestalt theory of organizational culture emergence. To this point, most organizational culture research has assumed that organizations' culture is dominated by one culture type. This view, however, appears to be too simplistic. Larger organizations have multiple business units, divisions, and operational units that seldom interact. In these organizations, organizational culture may represent a compilation, or a configuration, of the organizations' multiple subcultures (Schein, 2010). Organizational culture may best be described, then, as an amalgamation of subcultures that strategic leaders leverage to produce sustainable competitive advantage (Hartnell & Walumbwa, 2011). Understanding interactions within units is an important first step toward creating a more molar theory that encompasses interactions between units. Future work can thus build upon the unit-level theory of culture emergence to describe

how different culture types emerge within organizations and how these types interact to compose the organization's gestalt culture.

From a practical standpoint, the current theory informs leaders about how they can influence culture to achieve competitive advantage. Leaders directly form and shape culture through a variety of regulatory behavior from which unit members learn vicariously and develop normative expectations. Leaders should be particularly cognizant that their embedding behaviors send consistent signals to unit members about behavior that is valued, rewarded, and supported. Leaders also incrementally adjust or acutely reconfigure culture perceptions through propagating events. Reformulating goals, structuring unit roles and responsibilities, and engaging in coaching and performance feedback have the potential to modify or substantively change unit culture. Leaders who endeavor to change culture should actively regulate unit behavior and be astutely aware of gaps between unit members' vicarious and experiential norms. Leaders who do not actively manage unit perceptions, attributions, and behavior, and align them with leaders' normative expectations may unknowingly create informational ambiguity that compels unit members to collectively develop a deviant, counterproductive culture.

In addition to the above theoretically-derived avenues for future research, my theory has an important methodological implication. Organizational culture research has been dominated by single informants, primarily CEOs or top executives, who report the organization's culture (c.f., Hartnell et al., 2011). This methodology is particularly problematic for culture research because researchers

cannot ascertain to what extent culture is "shared." In addition to establishing culture's shared property, it is important to uncover the level at which culture is shared. Culture may be shared across all organizational members (i.e., integrated), differentiated across units, or not shared at all (i.e., fragmented) (Martin, 1992; 2002). This distinction is important because integrated and differentiated cultures may both exert social normative control over unit members' behavior but may differ appreciably in their structure. Culture emergence may result more from symbolic leadership and cascading at the organizational level (Kinicki et al., 2011; Chun et al., 2009) than from direct leader-unit interactions at the unit level. Researchers should not assume that unit-level emergence theory extrapolates to the organizational level. Consequently, special attention should be given to aligning measurement with level of theory. If researchers are interested in evaluating organizational culture, sufficient sampling is needed across the organization to assess the extent to which members from different units agree about the organization's culture. Subculture research, however, can be conducted by sampling multiple respondents across a number of units within the same organization. The theoretical propositions in this paper can be tested empirically by surveying multiple respondents within a single organizational unit because they elicit how culture emerges within a unit.

In conclusion, unit culture has gained a prominent place in organizational theory on the basis of what it is (i.e., content) and what it does (i.e., function). My work attempted to expand culture research by explicating how structured leader and unit regulatory processes produce learning that results in shared perceptions

about unit values, beliefs, and assumptions. I hope that these theoretical explanations stimulate additional culture research and bolster explanations about how and why culture is a source of sustainable competitive advantage.

FOOTNOTES

[1] For the purpose of the current article, work units are defined as a collection of individuals that include, but are not limited to strategic business units, divisions, departments, and teams within organizations.

[2] Newly formed workgroups may include start-up companies and newly created divisions, plants/offices, departments, task forces, or committees.

PAPER 2 - WIELDING A DOUBLE-EDGED SWORD: CEO TASK LEADERSHIP'S INFLUENCE ON FIRM PERFORMANCE THROUGH SOCIAL AND PSYCHOLOGICAL MECHANISMS

Research linking CEO leadership to firm performance has focused almost exclusively on the positive effects of charismatic (Waldman, Ramirez, House, & Puranam, 2001) and transformational leadership (Ling, Simsek, Lubatkin, & Veiga, 2008a; 2008b). While these forms of leadership are clearly important within upper echelons (Hambrick, 2005), there is a need to examine the impact of other forms of CEO leadership on firm performance because a leaders' primary function is "to do, or get done, whatever is not being adequately handled for group needs" (McGrath, 1962; p 5). For example, Bass and Bass (2008) noted that senior leaders spend "much more of their time in implementing strategies" (p. 685) than they do formulating strategies and visions. My study is based on the proposition that much can be learned about leadership within upper echelons by examining CEO task leadership because it is essential for strategic implementation, or execution (Bossidy & Charan, 2002; Dean & Scharfman, 1996).

Task leadership includes the extent to which CEOs structure followers' tasks and roles, institute rules and regulations, and develop and enforce performance standards. Task leadership is particularly interesting in upper echelons because it directs and coordinates employees' effort to improve firm performance. The positive effects between task leadership and effectiveness at lower organizational echelons are well documented (Judge, Piccolo, & Ilies,

2004; DeRue, Nahrgang, Wellman, & Humphrey, 2011; Burke, Stagl, Klein, Goodwin, Salas, & Halpin, 2006), but the positive results may not readily generalize to the strategic level. In fact, CEO task leadership may hinder firm performance because it can be perceived as onerous and overbearing among top management team (TMT) members who are experts in diverse functional domains and are responsible for carrying out the firm's strategic and operational initiatives. CEO task leadership can thus have paradoxical effects on followers and, consequently, firm outcomes.

Efforts to articulate the underlying mechanisms through which CEOs influence organizational performance is complicated by the possibility that the same set of task leadership behaviors may elicit both positive and negative reactions from subordinates. For example, Steve Jobs, former CEO of Apple, scheduled weekly meetings with his TMT to discuss results and review important projects. These meetings increased a sense of responsibility and fostered commitment to productivity and performance (Lashinsky, 2011). Despite the benefits of structured weekly meetings, Jobs was known to have scathing encounters with the TMT during the meetings (Isaacson, 2011). Undoubtedly driven by a task-driven vision about what the firm could be and should be, Jobs' leadership elicited visceral reactions from his direct subordinates. Griggs, Gross, and Milian (2011) best summarized Jobs' style by noting that he was a "charismatic, complicated figure who could inspire people one minute and demean them the next" (p. 1). Whereas Jobs' structured weekly meetings

energized and engaged employees, direct interpersonal interactions with Jobs often left executives feeling embarrassed and humiliated.

CEO task leadership's paradoxical effects raise the question, "Do CEO-TMT interactions send different motivational cues to TMTs than information derived indirectly from the CEO's influence on the organization's culture?" If so, then CEO task leadership may wield a double-edged sword in attempts to motivate TMTs to improve firm performance. This enigma is fundamental to unpacking how CEOs motivate their TMTs as means to enhance firm performance.

The purpose of the current study is to illuminate the black box, or unexamined processes, through which CEO task leadership influences firm performance. TMTs are an operative mechanism through which CEOs influence firm performance. The association between TMTs and firm performance is well documented (c.f., Carpenter, Geletkanycz, & Sanders, 2004; Certo, Lester, Dalton, & Dalton, 2006; Menz, 2012). Accumulating research also attests to the importance of TMT potency (Carmeli, Schaubroeck, & Tishler, 2011), TMT empowerment (Kinicki, Hartnell, Reina, & Peterson, 2012), and behavioral integration (Hambrick, 1998; 2005; Lubatkin, Simsek, Ling, & Veiga, 2006) as key processes linking CEO leadership to firm performance. Despite encouraging progress, some researchers suggest analyzing additional TMT social and psychological processes to further illuminate the leadership-performance black box (Hambrick, 2007).

Surprisingly, little work has examined the extent to which CEOs motivate their TMTs as a means to enhance firm performance. This gap is notable because motivational states have considerable value in explaining unit effectiveness (Chen & Kanfer, 2006). I thus examine TMT engagement as a key motivational mechanism linking CEO task leadership to firm performance. Engagement is a psychological state of mind in which employees invest their cognitive, affective, and physical energies in their performance of work (Christian, Garza, & Slaughter, 2011; Kahn, 1990; Macey & Schneider, 2008). Given task leadership's potential paradox at the strategic level, TMT engagement is interesting because it sheds preliminary light into how TMTs interpret CEO task leadership behavior.

Drawing upon theory that suggests CEOs engage in close (i.e., leadership directed toward the TMT) and distant (i.e., leadership directed toward the organization as a whole) leadership as means to enhance organizational performance (Waldman & Yammarino, 1999), I investigate if CEO task leadership has different implications for TMT engagement in close, direct interactions with the TMT than in distant interactions filtered through the leader's influence on the firm's organizational culture. I thus consider organizational culture and TMT engagement as mechanisms through which CEO task leadership influences firm performance. Moreover, I investigate the degree to which CEO task leadership and organizational culture wield unique explanatory power on TMT engagement. Figure 1 depicts the theoretical model under investigation.

Insert Figure 1 about here

I aim to contribute to the literature in four ways. First, I investigate CEO task leadership's role in affecting firm performance. Task leadership is an important, yet underexplored form of CEO leadership that is regarded as a "forgotten one" in leadership research (Judge et al., 2004). It merits further investigation at the strategic level because CEO task leadership is a practical function required for strategy implementation (Bass & Bass, 2008). Second, I offer insight into the CEO leadership – performance black box by enumerating two key mechanisms through which CEOs enhance firm performance: organizational culture and TMT engagement. Third, I build and test theory that illuminates why close and distant CEO-TMT interactions are sources of unique information that influence TMT engagement. Such an examination contributes to upper echelons research by exploring the possibility that CEO task leadership has paradoxical effects on TMT motivation and its consequences for firm performance. Fourth, the pattern of relationships yields insightful practical implications and illuminates avenues for future research that contributes both to leadership and upper echelons research.

THEORY AND HYPOTHESES

Task Leadership

CEO task leadership is a functional leadership behavior that is instrumental to firm performance because it enables the CEO to monitor functions critical for goal accomplishment and hold employees accountable for meeting

high performance standards. Despite task leadership's practical and theoretical value, researchers have predominantly studied the charismatic component (e.g., charisma, creating a vision, etc.) of transformational leadership within upper echelons (Agle, Nagarajan, Sonnenfeld, & Srinivasan, 2006; Tosi, Misangyi, Fanelli, Waldman, & Yammarino, 2004; Waldman, Javidan, & Varella, 2004; Waldman et al., 2001). Charismatic leadership focuses on developing and disseminating a clear and compelling vision to motivate employees toward a collective purpose (Bass, 1985). Although the visionary component of CEO leadership is critical to communicating the firm's strategic direction, CEOs also engage in task-focused behavior to monitor and implement initiatives to attain organizational objectives. Task leadership is defined as "the degree to which a leader defines and organizes his role and the roles of followers, is oriented toward goal attainment, and establishes well-defined patterns and channels of communication" (Judge et al., 2004: 36). Task leadership's purpose is to optimize task accomplishment through providing clarity about what employees should do and how they should do it (Burke et al., 2006).

In addition to the functional value of expanding the conversation about CEO leadership and its relationship with firm performance, the study's context lends itself toward investigating task leadership's influence on firm performance. Ninety-two percent of the firms in the current sample are privately owned. Private ownership enables CEOs to exercise greater managerial discretion and control without board oversight or requirements set forth by outside stakeholder groups (Hambrick & Finkelstein, 1987). Along with greater managerial

discretion, CEOs are more likely to invest themselves in strategic implementation (Lubatkin et al., 2006), requiring task-oriented leadership skills to executive the firm's strategic initiatives. Moreover, all of the firms in this study operate within the highly dynamic technology industry. The industry's volatility and rapid technological advancements require CEOs to be involved in directing, focusing, and streamlining TMT members' effort and holding them accountable for performance. Environmental volatility also creates uncertainty and ambiguity which makes organizational employees more receptive to CEOs exercising power (Finkelstein, 1992). CEO task leadership is thus a relevant and important leadership phenomenon that has the potential to offer unique insights into the nature of the relationship between CEO leadership and firm performance.

Illuminating the Black Box

My approach to illuminating the black box between CEO task leadership and firm performance is grounded in Chen and Kanfer's (2006) theory of motivation in teams. The theoretical perspective underscores the importance of team motivation for team performance. Motivational states influence the degree to which team members collaborate and coordinate effort directed toward shared unit outcomes. This rationale is consistent with team process theory which suggests that emergent cognitive, affective, and motivational states foster behavioral team processes conducive to enhancing team performance (Marks, Mathieu, & Zaccaro, 2001). Team motivational processes are thus instrumental mechanisms that wield impact on team performance.

In addition to team motivation's implications for unit effectiveness, Chen and Kanfer (2006) identified leadership and culture as two formative inputs into team motivation. They opined, "In work settings, leadership arguably represents the most important of all contextual factors, which might affect…team motivation" (Chen & Kanfer, 2006: 252). Although task leadership is important across levels within organizations, CEO task leadership is vital to a TMT's motivational state and level of engagement because CEOs are prominent decision-makers who influence how TMT members relate to and invest themselves in their work roles. CEOs shape the firm's strategic direction, establish structure to guide, direct, and integrate employees' effort, distribute resources, and provide performance-oriented feedback. Some task leadership behaviors are aimed exclusively toward the TMT as a whole (e.g., Steve Jobs' weekly meetings with his top executive team) and directly influence TMT engagement. Other task leadership behaviors are directed toward the entire organization. For example, Jack Welch, former CEO of General Electric (GE), established performance management systems that required firing the bottom 10% of employees as well as the bottom 10% of management. These organization-directed behaviors indirectly influence TMT engagement through elements of the work context, such as organizational culture (e.g.., establishing competition and aggressiveness as predominant organizational values). Consistent with Chen and Kanfer's (2006) theory of motivation in teams, I investigate CEO task leadership as a group-focused input that affects TMT engagement. More specifically, I examine the effects of two facets of group-focused leadership: leadership directed toward the

TMT and directed toward the organization. To be clear, this boundary condition precludes considering individual-focused leadership, in which CEOs influence TMT members individually by relating to each employee uniquely (Wang & Howell, 2010; Wu, Tsui, & Kinicki, 2010). Instead, I limit the current study's focus to CEO task leadership directed toward the TMT as a collective unit and toward the organization as a whole.

The bifurcation of CEO task leadership's influence into TMT-focused and organizational-focused behavior is consistent with multilevel leadership theory. Waldman and Yammarino (1999) contended that CEOs affect organizational performance through close and distant leadership. The distinction is based on the social proximity between CEOs and their followers. Close leadership occurs between CEOs and their TMTs. TMT-focused leadership pertains to CEO behavior that is directed toward all TMT members. For example, CEOs provide specific feedback to the TMT because they are responsible for implementing and executing the organization's strategic initiatives within their pertinent functional disciplines. Close leadership enables TMTs to gather information about the leader's trustworthiness, values, goals, and priorities through the team's direct exchanges with the CEO. Distant leadership, on the other hand, occurs through symbolic CEO leadership behavior that directed toward and visible by all organizational employees. Organizational-focused leadership occurs through facets of CEO task leadership, such as determining the organization's policies and enforcing rules and regulations. Schein (2010: 236) identifies organizational-focused task leadership behaviors as embedding mechanisms that teach

organizational members "how to perceive, think, feel, and behave." That is, all organizational employees observe, interpret, and assess the CEOs' structural and procedural choices to ascertain values, beliefs, and assumptions that are important within the organization. These organizational-directed behaviors create shared perceptions of informal rules and normative expectations that guide and direct employees' behavior. Organizational culture is thus an important social contextual mechanism through which CEO task leadership influences TMT engagement (Ostroff, Kinicki, & Tamkins, 2003).

Building on the theoretical basis of close and distant leadership, I first consider how distant CEO task leadership indirectly influences TMT engagement through organizational culture. I then turn our attention to explaining how close CEO task leadership exhibits a direct influence on TMT engagement. Finally, the relationship between TMT engagement and firm performance is considered.

Task Leadership and Task Culture

Organizational culture is "a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (Schein, 2010: 18). Once culture is formed, it conveys meaning to organizational members and emphasizes behaviors that are valued and rewarded, constituting a pervasive influence on employee attitudes and behaviors (Hartnell, Ou, & Kinicki, 2011; O'Reilly & Chatman, 1996; Ostroff et al., 2003).

CEOs are culture architects who create and embed culture (Hartnell & Walumbwa, 2011; Schein, 2010). Although the link between leadership and culture is widely presumed, scant empirical studies exist that examine the relationship. Preliminary work indicates that CEO values are a key input into organizational culture (Berson, Oreg, & Dvir, 2007). Other evidence provides initial support for leadership's role in influencing culture (Ogbonna & Harris, 2000; Xenikou & Simosi, 2006). Once organizational culture emerges, it becomes a social context within which leaders behave (Hartnell & Walumbwa, 2011; Schein, 2010). Whereas some leadership styles are culture innovators that create and change culture (e.g., charismatic leadership), others (e.g., transactional leadership) are more suited to maintaining a firm's existing culture (Trice & Beyer, 1991). Schein (2010: 235) argued that charismatic leadership is an important, but unreliable factor influencing culture creation because "leaders who have it are rare, and their impact is hard to predict." Non-charismatic leaders, however, embed their values, beliefs, and assumptions through their daily behavior and the formal mechanisms that reinforce their behavior. In line with Schein's arguments, I contend that CEO task leaders are culture innovators for three reasons.

First, CEO task leaders create task cultures by instituting uniform rules and regulations as well as establishing clear performance standards, two primary cultural embedding mechanisms (Schein, 2010). Clear performance expectations and consistent structure give employees clarity about what to do and how to do it. CEO task leaders also shape the firm's strategic goals, clarify organizational

members' roles, and integrate their efforts to accomplish organizational directives. Task-oriented leadership behaviors collectively reduce ambiguity, develop achievement-oriented normative expectations, and encourage employees to aggressively attain results to enhance firm performance. These distant task-oriented behaviors are observable by all organizational employees and send consistent signals about what is valued and expected, creating agreement about task culture. Task culture is an omnibus culture dimension that encompasses task-related values and beliefs such as high expectations, achievement, results, competitiveness, and aggressiveness. These values are commensurate with the Competing Values Framework's (CVF's; Cameron & Quinn, 1999; Quinn & Rohrbaugh, 1983) market culture, an external-oriented, achievement-focused culture that is positively related with aggregated employee attitudes, operational effectiveness, and firm effectiveness (Hartnell et al., 2011).

Second, CEO task leaders who inherit an existing set of organizational values, beliefs, and assumptions identify dysfunctional cultural aspects and change them as a means to enhance firm performance and competitiveness in the marketplace. Task leaders change culture through creating systems to reward task-oriented behaviors, communicating clear performance expectations, and changing organizational structure and procedures to focus employees' attention on goal accomplishment. These task leadership behaviors embed, to a greater degree, achievement-oriented values, beliefs, and assumptions within the organization.

Third, according to social learning theory, employees learn about desired values, beliefs, and underlying assumptions through learning vicariously from attractive and credible role models (Bandura, 1977). More specifically, followers derive normative expectations from *what* CEOs do. CEOs who adopt a competitive market strategy, structure roles and responsibilities, clarify expectations, monitor performance, and celebrate accomplishing the firm's performance objectives signal to employees that goal accomplishment is valued and important. Consequently, CEO task leadership emphasizes aggressively and competitively achieving results, values consistent with a task culture. For these reasons, I hypothesize:

Hypothesis 1: CEO task leadership is positively associated with task culture.

Task Culture and TMT Engagement

The work environment is an important source of information from which employees derive meaning. Kahn (1990) posited that employees perceive meaningfulness when tasks are challenging, clearly defined, creative, and autonomous, as well as when employees believe that their roles have a substantive impact on organizational outcomes. Task culture is an influential aspect of the work environment that shapes TMT members' perceptions of meaningfulness and how they allocate their energy in performing their jobs. Core values such as high performance expectations, aggressiveness, and accountability send signals about the meaningfulness of TMT members' work through challenging them to take action and meet and exceed expectations. The stimulating work context is

expected to invigorate TMT members because they feel confident in their ability to achieve and experience personal growth and learning in the process. Task-oriented values within the upper echelon enhance TMT members' perceptions that they make a difference and have an appreciable impact on organizational outcomes. Indirect support indicates that task-oriented job characteristics such as task significance, job complexity, and job responsibility are positively related to engagement (Christian et al., 2011; Crawford, LePine, & Rich, 2010). Ostroff et al. (2003) further posited that collective employee attitudes mediate the relationship between culture and organizational outcomes. Taken together, I contend that task culture creates a positive, challenging work context that motivates TMT members to invest their full affective, cognitive, and physical capacities in fulfilling it. Hence, I propose:

Hypothesis 2: Task culture is positively associated with TMT engagement.

Task Leadership and TMT Engagement

In addition to gathering distant leadership cues by interpreting the social contextual environment, TMT members collectively accumulate information by observing close leadership, or *how* CEOs monitor and control TMT behavior. Chen & Kanfer (2006) aptly noted that poor team performances are often attributed to leader deficiencies. This observation underscores leadership's centrality to team motivation and, subsequently, performance. In support, leadership directed toward the team influences team performance by enhancing group identification, collective efficacy, and team empowerment (Chen, Kirkman,

Kanfer, Allen, & Rosen, 2007; Wu et al., 2010). I thus consider the relationship between CEO task leadership and TMT engagement.

Task leadership is focused on clarifying expectations, accountability, and execution. One way CEO task leaders hold TMT members accountable is through weekly, task-focused business meetings designed to keep a pulse on progress and challenges associated with strategic initiatives. Within these meetings, task leaders engage in directive communication, uni-directional feedback, and a controlling approach to decision-making. *How* task leaders behave toward their teams may have distinct benefits at lower organizational echelons but deleterious consequences for team engagement at the upper echelon. Stated differently, team members' receptivity to task leadership may vary across levels of management. At lower organizational echelons, subordinates may need stringent guidelines from their leaders to produce products efficiently and consistently. Furthermore, strict adherence to policies and protocol may be necessary to prevent dangerous accidents, enhancing employees' safety. Task leadership may thus motivate employees at lower organizational levels through offering clear guidance and developing safe work conditions. In support, Judge et al. (2004) reported a positive association between leader initiating structure and follower motivation. Within the upper echelon, however, task leadership may be viewed as a constraining influence.

CEOs manage TMTs composed of highly competent executives with detailed knowledge of diverse functional disciplines (Menz, 2012). TMT members may thus need less guidance and structure to effectively execute their

job functions than employees at lower organizational echelons. Kahn (1990: 707) identified a characteristic of meaningful interactions as "when people treated one another not as role occupants but as people who happened to occupy roles." Task-oriented CEOs who exert control over TMT members' functions and demand procedural conformance exert coercive power and spur emotional conflicts that undermine TMT members' well-being. Disparaging interactions with the TMT foster members' perceptions of task-focused leadership as restrictive, impersonal, and an impediment to their effective performance. These negative events trigger negative emotions which make TMT members resistant to fully invest themselves in their work roles for fear of further emotional conflict. In response, TMT members may disengage from their work and adopt a prevention regulatory focus (i.e., fulfill cursory duties and obligations) to avoid further pain. In support, meta-analytic data indicates that emotional conflict, organizational politics, and administrative hassles are negatively correlated with engagement (Crawford et al., 2010). I thus predict:

> *Hypothesis 3a: CEO task leadership is negatively associated with TMT engagement. Hypothesis 3b: Task culture partially mediates the association between CEO task leadership and TMT engagement.*

TMT Engagement and Firm Performance

TMTs play a pivotal role in organizational functioning. TMT members have domain-specific expertise, are responsible for critical aspects of organizational functioning, and are conduits through which the CEO implements and executes the firm's strategic vision. Stated differently, TMTs are highly

competent organizational members who are responsible for executing core aspects of the organization's strategy that are critical to firm performance. Given TMTs' focal position in carrying out the firm's strategic choices, I consider the effect of TMT engagement on firm performance. At lower organizational echelons, team motivational states influence team performance (Chen & Kanfer, 2006). Meta-analyses, for instance, report that collective efficacy, team potency, and team empowerment are significantly related to team performance (c.f., Gully, Incalcaterra, Joshi, & Beaubien, 2002; Seibert, Wang, & Courtright, 2011). These results substantiate the value of examining an important motivational state, engagement, at the upper echelon. Engaged TMTs invest their physical, cognitive, and affective energy toward fulfilling and exceeding role expectations. TMTs' intense psychological involvement in their work is expected to have a positive effect on firm performance for three reasons.

First, TMTs are the gateway to the organization. An energized TMT multiplies excitement, energy, and enthusiasm among employees within their functional domains because they are attractive and credible role models who employees observe and emulate. In support, Bono and Ilies (2006) reported that leaders' positive emotional expressions induced followers' positive mood states. Further empirical evidence indicates that motivation can also be contagious (Chen et al., 2007). Related research indicated that TMT empowerment was positively associated with engagement among middle managers, supporting the notion of motivational contagion (Ou, Tsui, Kinicki, Waldman, Xiao, & Song, 2011). Consistent with these findings, I suspect that TMT member engagement is

contagious among employees at lower organizational echelons and spurs them to invest greater effort and intensity toward their own work roles. In combination, an engaged TMT promotes engaged employees throughout the organization who cumulatively impact firm performance.

Second, TMTs are frequently tasked with solving complex problems without clear solutions. Kahn (1990) suggested that engagement fosters resilience, focused effort, and enthusiasm and absorption in carrying out the work role. I propose that engaged TMTs express persistence and dedication which enables them to generate creative solutions to complex problems, positively influencing firm performance.

Third, engaged employees expand their role definitions and expend discretionary effort to help colleagues as well as the organization at large (Kahn, 1990). As such, engaged TMTs may be more likely to cooperate and coordinate efforts across functional silos to create multidisciplinary solutions that enhance firm outcomes. This conclusion is supported by the positive relationship between engagement and organizational citizenship behavior (Christian et al., 2011; Rich et al., 2010).

In addition to the theoretical explanations posited above, meta-analytic evidence supports the positive relationship between engagement and performance at the individual (Christian et al., 2011) and unit (Harter, Schmidt, & Hayes, 2002) levels of analysis. Based on the preceding discussion, I posit:

Hypothesis 4: TMT engagement is positively associated with firm performance.

METHODS

Procedures and Sample

This study was part of a larger data collection effort from a technology consortium in which 205 CEOs and their respective CFOs participated to develop intra-industry networking ties and gain insight into industry benchmarks. A member of the research team attended the consortium to explain the research project, encourage CEOs to participate, and promised to present an overview of the study's results. One-hundred twenty firms agreed to participate. CEOs and their CFOs completed surveys during one of the consortium's quarterly meetings. Participating CEOs subsequently identified their top management team members and personally encouraged them to participate in an electronic survey. The survey instructions informed TMT respondents that their participation was voluntary and assured them that their responses were confidential. Of the 382 TMT members from the participating firms, data were obtained from 338 TMT members. The 88.5% participation rate is favorable compared with extant studies involving TMTs (Smith, Collins, & Clark, 2005). Consistent with convention in upper echelon research (Ling et al., 2008a), I excluded surveys from firms with less than a 50% response rate from the TMT. Surveys from firms with only one TMT respondent (when the entire TMT consisted of two members) were also omitted to ensure that agreement existed between TMT members within an organization. Taken together, responses from 106 firms and 324 TMT members were used in the analysis, yielding 51.7% of the firms in the original sample.

Firms in the sample averaged 782 employees and 92% were privately held. Approximately 80% of the CEOs were male and 81% were Caucasian. Average tenure as CEO was 4.2 years, with over 69% of the CEOs serving at least 3 years as CEO. Firms' TMT size averaged 3.33 members, excluding the CEO. On average, 3.06 TMT members responded per organization. In 72% of the firms, three or more TMT members responded to the survey. Eighty-seven percent of the TMT members were male and 79% were Caucasian. TMT members had an average tenure of 3.4 years on the TMT with 69.1% of the surveyed members having served at least 3 years on the TMT.

Access to both the CEOs and their TMTs afforded me the opportunity to adopt a survey methodology with multiple sources of data and different time periods, helping me to meet the unique challenges of collecting data from CEOs while enhancing the validity of the study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). All constructs were measured using validated scales from previous research. TMT members rated their CEO's leadership behavior as well as TMT engagement. CEOs and their TMT members jointly rated the organization's culture. To mitigate common method bias as an explanation for relationships with performance, I relied on firms' objective financial data (Return on Assets; ROA) for three quarters after CEOs and their TMTs completed surveys. The objective firm performance figures were provided by the technology consortium with permission from the CEOs.

Measures

In structural equation modeling, researchers recommend that the ratio of sample size to indicators should exceed 5:1 (Bentler & Chou, 1987). The modest sample sizes make the use of items as indicators unfeasible. An alternative to using items as indicators is to average items into parcels to generate composite latent variable indicators. Item parcels improve model fit in small sample sizes and increase power to detect significant effects by conserving the number of estimated parameters (Landis, Beal, & Tesluk, 2000).

Task leadership. I assessed CEO task leadership using five items from the Leader Behavior Description Questionnaire (LBDQ XII; Stogdill, 1963) that describe leader initiating structure. Initiating structure evaluates the degree to which a leader emphasizes behaviors such as clarifying expectations, procedures, and performance standards. Five items were included in the survey based on the strength of their factor loadings in an extant study validating the LBDQ XII (Schriesheim & Stogdill, 1975). One item was dropped from the current analysis due to poor factor loading, resulting in a four-item scale. Using a response scale ranging from 1, "to a very small extent," to 5, "to a very large extent," TMT members were asked, for example, to rate the extent to which the CEO, "Lets group members know what is expected of them," "Encourages the use of uniform policies," "Maintains definite performance standards," etc. Across TMT members, coefficient alpha for the 4-item scale was .82.

I followed the single factor item parceling procedure (Landis et al., 2000; Rogers & Schmitt, 2004) for task leadership because it is not composed of a priori

dimensions. Maximum-likelihood exploratory factor analysis (EFA) was used to assess the extent to which the four task leadership items loaded onto a single factor. Consistent with prior research, results revealed that all four items clearly loaded on one factor. Following recommendations set forth for creating empirically balanced item parcels (Landis et al., 2000), I distributed the four items among two parcels based on their factor loading; the highest and lowest loading items were assigned to the first parcel, and the middle two items were assigned to the second parcel.

A one-way analysis of variance (ANOVA), with the organization as the independent variable, was conducted to assess if greater variability existed in ratings between firms than within firms. ANOVA indicated that CEO task leadership ratings were significantly different between organizations ($p < .01$). I also calculated interrater agreement values ($r_{wg(j)}$; James, Demaree, & Wolf, 1984) and intraclass correlation coefficients, ICC (1) and ICC (2), to assess whether sufficient within-unit agreement and between-unit variability existed to justify aggregating task leadership to the firm level. Aggregation statistics yielded acceptable values (average $r_{wg(j)} = .88$; ICC (1) = .49; ICC (2) = .74) that warrant aggregating task leadership to the firm level.

Task culture. Task culture items were drawn from the Organizational Culture Profile (OCP; O'Reilly, Chatman, & Caldwell, 1991), a commonly-used measure to assess organizational culture. Task culture was measured using six items that reflect two performance-focused OCP dimensions: *outcome orientation* and *aggressiveness*. Concordant with the internal consistency approach to

creating item parcels (Kishton & Widaman, 1994), items from each dimension were averaged to generate two indicators for task culture. Respondents were asked to indicate the extent to which they agreed that the values were characteristic of their organization's culture on a response scale that ranged from 1, "strongly disagree," to 5, "strongly agree." Sample value statements for task culture were "A results orientation," "High expectations," and "Competitiveness." Coefficient alpha for the six-item scale was .86. Checks for aggregating task culture yielded acceptable values (average $r_{wg(j)}$ = .87; ICC (1) = .59; ICC (2) = .85).

TMT engagement. Twelve items from the Salanova, Schaufeli, Llorens, Peiro, & Grau's, (2001) Utrecht Work Engagement Scale (UWES) were used to assess three dimensions that underly TMT engagement: the extent to which TMT members felt (1) vigorous (four items), (2) dedicated (four items), and (3) absorbed with their work (four items). Items were averaged according to their a priori dimensions to generate three indicators of TMT engagement. Sample items included "In my job I am mentally very resilient" (vigor), "I am proud of the work I do" (dedication), and "I am immersed in my work" (absorption). The response scale ranged from 1, "strongly disagree," to 5, "strongly agree." Coefficient alpha for the 12-item scale was .90.

TMT members' engagement ratings were aggregated to the firm level using the direct consensus model of aggregation (Chan, 1998). Direct consensus suggests that agreement among TMT members regarding the extent to which they feel engaged is representative of the TMT's engagement as a whole. Aggregation

statistics (average $r_{wg(j)}$ = .95; ICC (1) = .61; ICC (2) = .83) revealed high levels of between-firm variance and within-firm agreement, suggesting that TMT members have a high level of consensus about their engagement within the work environment and substantive differences in TMT members' engagement across organizations. The rationale underlying the direct consensus aggregation model is further supported by the magnitude of interrater agreement (i.e., ICC (2)), suggesting that each rater provided a highly reliable rating of the group mean. Taken together, the aggregation statistics justify aggregating TMT engagement to the firm level.

Firm performance. Objective performance data (i.e., ROA) was made available by the technology symposium and with the permission of the participating CEOs. ROA is a commonly used performance measure to assess organizational performance (c.f., Richard, Devinney, Yip, & Johnson, 2009). It was captured as annual income before extraordinary items and discontinued operations, divided by net assets. Each firm's quarterly ROA was collected for three quarters after surveys were administered. The three quarterly performance figures were used as indicators for firm performance.

Control variables. I controlled for CEO tenure, founder status, firm size, TMT tenure, and TMT size because they have been shown to relate to firm performance (c.f., Carpenter et al., 2004; Ling et al., 2008b). I did not control for industry differences because all the firms in this sample were from the technology industry.

Analytic Procedures

I tested the hypothesized relationships using maximum-likelihood structural equation modeling (SEM) in EQS 6.1. Maximum likelihood was used because Mardia's coefficient indicated that that data were multivariate normal. Overall model fit was assessed using the non-normed fit index (NNFI; Bentler & Bonett, 1980), the comparative fit index (CFI; Bentler, 1990), and the incremental fit index (IFI; Bollen, 1989). NNFI, CFI, and IFI values greater than .90 indicate good fit and values greater than .95 indicate excellent fit (Hu & Bentler, 1999). In addition to the model fit indices, the root-mean-square error of approximation (RMSEA; Browne & Cudeck, 1992) was used to evaluate model lack of fit. RMSEA values .08 or lower indicate adequate fit (Hu & Bentler, 1999). Chi-square difference tests were also conducted to evaluate the fit of alternative structural models.

RESULTS

Table 1 shows the means, standard deviations, and correlations among the latent factor indicators. Following Anderson and Gerbing's (1988) two-step approach, I examined the measurement model first and then tested the structural model to evaluate hypothesized relationships.

Insert Table 1 about here

Measurement Model Results

Table 2 indicates that the hypothesized baseline model fit the data well, χ^2 (29, N = 106) = 49.55, $p < .05$; NNFI = .97; CFI = .98; IFI = .98; RMSEA = .08).

I further analyzed the adequacy of the hypothesized model by examining convergent and discriminant validity. Figure 2 shows that all manifest indicators loaded significantly on their respective latent constructs, lending support for the indicators' convergent validity. The average standardized factor loading was .93.

Insert Table 2 and Figure 2 about here

I assessed the baseline model's discriminant validity through a series of alternative measurement models. First, I evaluated the degree to which the latent factors are distinct by comparing the baseline model to a null model (construct correlations are fixed to 0) and a single factor model (construct correlations are fixed to 1). Table 2 reveals that the null model, χ^2 (35, N = 106) = 141.53, $p < .05$; NNFI = .87; CFI = .90; IFI = .90; RMSEA = .17, and the single factor model, χ^2 (35, N = 106) = 773.30, $p < .05$; NNFI = .08; CFI = .28; IFI = .29; RMSEA = .45; significantly reduced model fit. I then tested construct independence between each set of variables with a predicted relationship (other than firm performance) to ascertain if they are empirically distinct.

The first discriminant model constrained task leadership and task culture to be perfectly correlated and equally correlated with the other constructs in the model, resulting in worse fit to the data, χ^2 (32, N = 106) = 280.02, $p < .05$; NNFI = .66; CFI = .76; IFI = .76; RMSEA = .27 (see Table 2). The second discriminant model equated task culture with TMT engagement. Table 2 indicates that the model fit the data significantly worse than the baseline model, χ^2 (32, N = 106) = 223.38, $p < .05$; NNFI = .74; CFI = .81; IFI = .82; RMSEA = .24. Finally, results

from the fourth discriminant model, equating task leadership with TMT engagement, χ^2 (32, N = 106) = 270.36, p < .05; NNFI = .67; CFI = .77; IFI = .77; RMSEA = .27; indicate that the model constraints did not fit the data as well as the baseline model. Taken together, the alternative measurement models provide support for the discriminant validity among the latent factors.

Structural Model Results

Global fit statistics in Table 3 revealed that the hypothesized baseline structural model provided very good fit to the data, χ^2 (88, N = 106) = 119.37, p < .05; NNFI = .96; CFI = .97; IFI = .97; RMSEA = .06. As predicted, Figure 3 shows that task leadership was positively associated with task culture (β = .38, p < .05), supporting Hypothesis 1. Hypothesis 2 was confirmed in that task culture significantly predicted TMT engagement (β = .65, p < .05). Consistent with the expectation that task leadership is negatively related to TMT engagement (Hypothesis 3a), Figure 3 indicates that task leadership was negatively associated with TMT engagement (β = -.66, p < .05). Hypothesis 3b posited that task culture partially mediates the relationship between task leadership and TMT engagement. The significant relationship between task leadership and TMT engagement was significant after accounting for the mediating effect of task culture. I also examined an alternative model in which task culture fully mediated the association between task leadership and TMT engagement. Results in Table 3 indicate that the fully mediated model fit the data significantly worse than the baseline (i.e., partial mediation) model, χ^2 (89, N = 106) = 168.36, p < .05; NNFI = .91; CFI = .92; IFI = .92; RMSEA = .09. Taken together, evidence suggests

that task culture partially mediated the task leadership-TMT engagement link. Hypotheses 3a and 3b were thus supported. Finally, TMT engagement was positively related with firm performance ($\beta = .21$, $p<.05$), lending support for Hypothesis 4.

Insert Table 3 and Figure 3 about here

None of the control variables predicted a significant amount of variance in the structural model. More specifically, CEO tenure and CEO founder status failed to explain a significant amount of variance in task culture beyond task leadership. Likewise, firm size, TMT tenure, and TMT size did not explain variance in firm performance beyond that of TMT engagement.

Alternative Structural Models

The primary focus of the alternative structural model was to determine if CEO task leadership had a direct effect on firm performance. Ling et al. (2008a) reported that CEO transformational leadership directly influenced corporate entrepreneurship, even after accounting for a number of mediating mechanisms. Accordingly, it is possible that task culture and TMT engagement may not fully mediate the relationship between CEO task leadership and firm performance. I tested this possibility, as noted in Table 3, in an alternative structural model to determine whether task leadership exhibited a direct effect on firm performance after accounting for the mediating effects of task culture and TMT engagement. More specifically, I added a path to the baseline model linking task leadership to firm performance. Table 3 indicates that the alternative model did not fit the data

significantly better than the baseline model χ^2 (87, N = 106) = 116.18, $p < .05$; NNFI = .97; CFI = .97; IFI = .97; RMSEA = .06, and the path from task leadership to firm performance was not significant. CEO task leadership thus influenced firm performance indirectly through task culture and TMT engagement.

DISCUSSION

Upper echelons theory postulates that CEOs affect firm performance through developing, disseminating, and implementing the organization's strategic directives (Finkelstein, Hambrick, & Cannella, 2009; Hambrick & Mason, 1984). Whereas extant research has focused primarily on the effects of CEOs who develop and communicate an inspirational vision, I consider the impact of CEO leadership that focuses on executing the firm's strategic choices. This study contributes to the leadership and upper echelons literatures by examining CEO task leadership and the social and psychological mechanisms through which it influences firm performance. Using a lagged measure of objective firm performance as well as survey data collected from CEOs and their TMT members, I explored task culture and TMT engagement as mediators of CEO task leadership – firm performance relationship. Results from structural equation models supported my hypotheses, indicating that task culture and TMT empowerment mediated task leadership's effect on firm performance. As predicted, findings indicated that CEO task leadership had a paradoxical effect on firm performance. Task leadership's positive effect on firm performance occurred through its positive relationship with task culture, culture's positive

association with TMT engagement, and engagement's positive link with firm performance. Conversely, task leadership hindered firm performance through its negative, direct relationship with TMT engagement. These findings and their implications will now be considered.

Theoretical Implications

The study's results have four implications for leadership theory and upper echelons research. First, results support the value of examining CEO task leadership as an important leadership function within upper echelons. Task leadership's role in enhancing firm performance supports arguments that task leadership is a "forgotten one" in leadership research and still has theoretical and practical value for explaining contemporary organizational behavior (Judge et al., 2004; Keller, 2006; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008). From a theoretical standpoint, CEO task leadership is a valuable leadership approach because it illuminates how CEOs implement strategic choices and its implications for firm performance.

At a broad level, CEOs influence firm outcomes through developing, communicating, and implementing strategic choices. CEOs execute these strategic directives in different ways. As such, further examinations of CEO leadership should correspondingly adopt a multifaceted approach to include leadership behaviors that uniquely carry out these strategic functions. Drawing upon extant leadership classifications (DeRue et al., 2011; Yukl, Gordon, & Taber, 2002), task-focused, relationship-focused, and change-focused leadership behaviors may provide a useful taxonomy to more precisely investigate how

CEOs influence firm performance. I contend that each leadership category yields unique insight into how and why CEOs influence firm performance. For instance, CEO change leaders may use their charismatic ability to develop and articulate the firm's strategic direction as a means to inspire members to identify with the organizational goals and address challenges in an innovative way. CEO relationship leaders may leverage their strengths to influence organizational outcomes by involving TMT members to collectively craft and mold the firm's strategic choices, thus fostering a greater degree of teamwork, participation, and behavioral integration. In contrast, CEO task leaders may be primarily concerned with enhancing firm performance through establishing procedures to facilitate organizational members' success and by clarifying, communicating, and holding followers accountable to high performance expectations. All three leadership approaches have the potential to systematically illuminate the CEO leadership – performance black box in a systematic way.

The second theoretical implication relates to the social and psychological mechanisms through which CEO task leaders influence firm performance. Results indicated that task leadership did not directly affect firm performance, underscoring the importance of mediating processes. I illuminated the CEO task leadership – performance black box through introducing a social and psychological mechanism that, heretofore, has not been considered in upper echelons research. Grounded in Chen & Kanfer's (2006) theory of motivated behavior in work teams, I introduced TMT engagement and task culture as instrumental mechanisms that mediate CEO task leadership's influence on firm

performance. Although Chen and Kanfer's theory does not explicitly incorporate the upper echelons, this study's results support the theoretical propositions and suggest that it be integrated with insights from upper echelons theory to unveil further social and psychological mechanisms that link CEO leadership to firm performance.

Third, results advance a more nuanced understanding of the countervailing complexities within the CEO leadership – performance black box. In line with Waldman and Yammarino's (1999) assertion that CEOs express distant and close leadership, this study's findings indicated that these leadership foci have distinct implications for task leadership and firm performance. Distant task leadership (i.e., leadership directed toward all organizational employees) *indirectly* affects TMT engagement through embedding results-oriented values, beliefs, and assumptions into the organization. High performance expectations, evinced by a task culture, invigorate TMT members and challenge them to be fully engaged in their jobs, yielding efforts that result in stronger firm performance. Conversely, close task leadership (i.e., leadership directed toward the TMT) *directly* affects TMT engagement because it constrains highly competent TMT members' autonomy by demanding procedural conformance and fosters confrontational encounters with the TMT. TMT members thus develop negative affective reactions which discourage them from fully applying their physical, cognitive, and affective faculties to their work roles. These paradoxical results have three additional contributions to the literature.

First, the negative relationship between CEO task leadership and TMT engagement lends preliminary evidence to how CEO leadership behaviors undermine, rather than improve, firm performance. This finding challenges the prevailing assumption that CEO leadership has a universally positive impact on the organization. Second, the opposing effects between distant and close task leadership on TMT engagement may, in part, account for the non-significant relationship that I as well as a recent meta-analysis reported between CEO task leadership and firm performance (DeRue, Karam, Mannor, & Morgeson, 2008). Third, CEO task leadership's positive, indirect relationship and negative, direct relationship with TMT engagement expands Waldman and Yammarino's (1999) theory about distant and close leadership. Rather than directly testing how distant leadership influences functioning at lower organizational levels and close leadership affects TMT functioning, I explicate the consequences of distant *and* close leadership on TMT functioning. This study thus contributes theoretically by explicating how distant and close CEO task leadership send materially different motivational cues to TMT members.

The study's fourth theoretical implication is that existing research has given scant attention to social and motivational mechanisms linking CEO leadership and firm performance. Examining engagement within the TMT is theoretically important because it accounts for TMT members' perceptions of inputs into their contextual environment (e.g., leadership and culture). The study's results indicate that TMT members interpret cues from the organization's task culture positively but respond to direct task-oriented cues from the CEO

negatively. TMT members' psychological response to characteristics of their work environment thus merits further investigation to fully unpack how and why TMTs are motivated to work toward improving organizational outcomes.

The study' results also shed light on the importance of TMT engagement and organizational culture to firm performance. TMT engagement was positively related to firm performance, lending preliminary support for engagement's positive consequences at the organizational level. Consistent with extant theory, I found that task culture influenced firm performance through an aggregated employee attitude, TMT engagement (Ostroff et al., 2003). Findings further add to the body of evidence attesting to the direct link between CEO leadership and culture (Ogbonna & Harris, 2000; Xenikou & Simosi, 2006; Schein, 2010).

Managerial Implications

This study has three notable managerial implications. First, CEOs should be cognizant that task leadership can be a double-edged sword because it can both motivate and de-motivate TMT members. CEOs are encouraged to embed a task culture by establishing high normative performance expectations through instituting measures to measure, monitor, and recognize high performance, allocating rewards and status to high performers, and developing policies, practices, and procedures that emphasize goal achievement (Schein, 2010). Results indicate, however, that CEO task leadership has a deleterious impact when CEOs interact closely with their TMTs. CEO task leaders should mitigate their negative impact on TMT engagement by balancing their task focus with complementary relational behaviors: soliciting TMT members' feedback,

instituting their suggestions, expressing trust in their ability to execute the strategic directives, and giving them autonomy to fulfill their work roles. These behaviors foster bi-lateral trust develop confidence that the TMT can and will successfully execute the firm's strategy. Exhibiting both task and relationship-oriented leadership is posited to have positive organizational implications (Blake & Mouton, 1968) and attenuate TMT members' interpretation that their CEO is overly aggressive or controlling. Alternatively, CEOs who have infrequent interactions with their TMTs should identify a TMT member with complementary leadership skills (i.e., relationship-oriented leadership) as a conduit through which the CEOs message is disseminated to the rest of the TMT.

Results further encourage CEOs to be attentive to shaping a work context that fosters TMT members' excitement, enthusiasm, dedication, and involvement in their work roles. Crawford et al. (2010) reported that a positive workplace climate, autonomy, rewards and recognition, and job variety are all functional aspects of the job that enhance employees' engagement. CEOs should work toward enhancing these positive features of the work environment to spur TMT members' engagement.

Limitations

The results of this study should be considered in light of its limitations. First, respondents in the current sample came from the high-technology industry. Consequently, it is possible that the pattern of relationships is not generalizable to firms in other industries. Future research should enhance the external validity of the findings by sampling firms across industries.

Second, CEO task leadership, task culture, and TMT engagement were collected at the same point in time, raising the possibility that results are inflated due to common method bias. I attempted to mitigate these concerns by incorporating a different set of respondents to measure task culture than CEO task leadership and TMT engagement. The CEO and the TMT collectively rated task culture, whereas only TMT members rated CEO task leadership and TMT engagement. Consequently, the respondents were partially different for two of the hypothesized relationships. Furthermore, I collected responses from multiple TMT members to attenuate the possibility that ratings were based on individual respondents' affect (Podsakoff et al., 2003). Finally, I utilized a lagged, objective measure of firm performance, thus precluding the possibility that TMT engagement's relationship with firm performance is due to common method variance. Taken together, multiple sources as well as lagged performance measures reduce the probability that common method bias completely accounts for the results.

Third, only CEOs and TMT members assessed organizational culture. Some have argued that culture can manifest itself as a unified organizational culture, differentiated subcultures, or fragmented cultures (i.e., complete dissensus) (Martin, 2002). I do not know the extent to which the agreement expressed among the CEO and TMT about the organization's values, beliefs, and assumptions is shared by all organizational members throughout the firm. Such an investigation would be an onerous and impractical constraint to make statistical inferences about culture and its impact on key variables across

organizations. Although the tradition in the culture literature has been to sample single, key informants (Hartnell et al., 2011), this study sampled multiple executives familiar with different aspects of the organization's functioning. CEOs and their TMTs expressed a considerably high level of agreement (average $r_{wg(j)}$ = .87; ICC (1) = .59; ICC (2) = .85), indicating support for the existence of an organizational culture.

Directions for Future Research

The study's results offer persuasive evidence for the role of task leadership, task culture, and TMT engagement with firm performance. They also raise several intriguing avenues for future research. Future studies should investigate if other CEO leadership behaviors have paradoxical effects on TMT motivation. CEO relationship leadership, for instance, may positively impact TMT members' motivation, but a relationship culture that espouses teamwork, participation, and collaboration may deter loosely coupled TMTs from accomplishing their work effectively and efficiently. Barrick, Bradley, Kristof-Brown, and Colbert (2007: 553) reported that "increased levels of interaction among TMT members are not always beneficial to team or firm performance." In support, Kinicki et al. (2012) found that relationship-oriented cultures were negatively related with TMT empowerment and mitigated the positive association between TMT engagement and firm performance. Future research should also explore behavioral team processes that link TMT engagement to firm performance. What roles do behavioral processes such as knowledge sharing, behavioral integration, and collaboration play in linking TMT engagement to firm

performance? Linking emergent TMT motivational states with behavioral TMT team processes will further illuminate how TMTs are instrumental to enhancing firm performance (Carpenter et al., 2004; Menz, 2012). It will also contribute to upper echelons theory by unveiling social and psychological processes that drive executive behavior (Hambrick, 2007). Finally, future research should consider the extent to which TMT engagement is contagious to employees at lower organizational echelons. While preliminary evidence indicates that team motivation is, indeed, transferable to lower-level employees (Chen et al., 2007; Ou et al., 2011), more research is needed to illuminate the process through which motivational transference occurs.

Conclusion

CEO task leadership is a functional leadership behavior vital to strategic implementation. My intent was to illuminate social and psychological processes linking CEO task leadership to firm performance and to explore task leadership's double-edged effects on TMT engagement. Findings support the validity of task leadership in CEO leadership research and uncover its paradoxical influence on TMT engagement, an intriguing relationship that has stark benefits and consequences for firm performance. Distant CEO task leadership positively impacts firm performance through task culture and TMT engagement, but close CEO task leadership impedes firm performance through its negative impact on TMT engagement. I hope this study will motivate future research to expand work on CEO leadership and consider additional social and psychological mechanisms to unpack the CEO leadership – performance black box.

PAPER 3 - SEEING THE FOREST THROUGH THE TREES: CONFIGURATIONS AND DIMENSIONS IN ORGANIZATIONAL CULTURE

Organizational culture is a social contextual mechanism consisting of shared values, beliefs, and underlying assumptions that inform employees how they ought to behave (Schein, 2010; O'Reilly & Chatman, 1996). The study of organizational culture dates back to the 1930's (c.f., Trice & Beyer, 1993), but empirical research blossomed in the 1980's largely following the publication of several best-selling trade books. Interest in studying organizational culture within the management literature was further spawned by Barney's (1986) contention that culture can be a source of sustainable competitive advantage. Hartnell, Ou, and Kinicki (2011) attempted to determine if culture really does create competitive advantage by conducting a meta-analysis of relationships between three culture types and three major indices of organizational effectiveness from 1980 – 2008. Results only partially supported the theory of competitive advantage. Specifically, the three culture dimensions exhibited moderate to large effects with narrow effectiveness outcomes such as organizational commitment, innovation, and product and service quality, but effect sizes were small or insignificant for the three culture dimensions' association with broader effectiveness criteria, such as profit, growth, and market performance. Given the qualitative claims of culture's competitive importance, Hartnell et al.'s results suggest that a deeper investigation of relationships between organizational culture and outcomes is needed. The overall goal of this study is to test a potential methodological explanation for why organizational

culture dimensions may not obtain moderate to strong relationships with broad measures of organizational effectiveness.

A recent review of the culture and climate literature by Ostroff, Kinicki, and Mohammad (in press) provides a starting point for understanding the small to moderate effect sizes found by Hartnell et al. (2011). Ostroff et al. noted that organizational culture is not a unitary construct. It entails a complex interaction among multiple cultural dimensions that operate together as a system. This conclusion is consistent with theoretical work that emphasizes the importance of the *pattern* of cultural values (Schein, 1985, Trice & Beyer, 1993) and the belief that culture is a gestalt construct composed of the interplay of multiple culture dimensions (Denison & Spreitzer, 1991). The level of culture theory thus raises important questions about the validity of examining bivariate relationships between cultural dimensions and outcomes relative to studying the effects of culture profiles, or configurations.

Configurations are "conceptually distinct characteristics that commonly occur together" (Meyer, Tsui, & Hinings, 1993: 1175). Said differently, configurations are clusters of interconnected values, structures, and practices. They account for the complexity and interrelationships among organizational characteristics (i.e., culture dimensions) by identifying underlying patterns and systems among them (Fiss, 2007; Schulte, Ostroff, Shmulyian, & Kinicki, 2006). Configurations enable researchers to examine culture holistically, as opposed to examining individual dimensions. Configurational research has recently gained traction in related fields such as human resource practices (Toh, Morgeson, &

Campion, 2008), organizational climate (Schulte et al., 2006), and organizational commitment (Sinclair, Tucker, Cullen, & Wright, 2005). Conclusions from these studies indicate that configurations have theoretical and practical utility because they consolidate dimensions into bundles of resources that have differential relationships with important outcomes such as organizational values, structure, and employees' job satisfaction. Similar to insights derived from related literatures, recent evidence suggests that culture configurations may also add value for organizational culture research.

An issue impeding organizational culture's theoretical progress is questions concerning whether culture should be conceptualized as a gestalt (i.e., broad) or as facet-specific (i.e., narrow) dimensions. This bandwidth-fidelity debate (Cronbach & Gleser, 1965) is common within streams of research aiming to understand complex, multi-faceted phenomena such as personality, job attitudes, and organizational climate. It is exacerbated by broad and narrow perspectives that develop independently (and often antagonistically) without integration, limiting our knowledge about the phenomenon and its underlying components (Judge & Kammeyer-Mueller, 2012). For example, proponents of facet-specific dimensions maintain that gestalt conceptualizations are conceptually amorphous and lose definitional clarity. Conversely, proponents of the gestalt perspective claim that narrow dimensions increase construct specificity at the expense of coherence essential to better understand a multifaceted construct. Edwards (2000: 145) cogently noted that this debate "presents a dilemma for OB researchers who want the breadth and comprehensiveness of

multidimensional constructs and the clarity and precision of the dimensions that constitute the construct. These apparently conflicting objectives cannot be achieved if a researcher adopts one side of the debate." To date, few studies have aimed to integrate these perspectives or offer conciliatory solutions to move the field forward. Toward this end, I aim to illuminate why and when culture configurations contribute uniquely to the culture literature beyond culture dimensions (i.e., seeing the forest through the trees)

This study contributes to the literature in four ways. I first extend bandwidth theory by incorporating configurations into the bandwidth continuum. Configurations adopt a broader bandwidth than dimensions (i.e., both first-order and second-order dimensions) by identifying patterns of relationships among its component parts. As such, configurations account for non-linear interactions among the constituent dimensions. This approach is theoretically germane for organizational culture research. Second, culture dimensions and configurations are examined simultaneously to investigate their incremental predictive validity. Judge and Kammeyer-Mueller (2012) recommended that researchers consider both broad and narrow measures in a single study to identify which bandwidth is more appropriate for a given outcome. Accordingly, this study empirically partitions variance by culture bandwidth to assess each measure's predictive validity. Third, in line with recommendations that the breadth of the criterion should dictate the breadth of the predictor (Cronbach, 1960; Hogan & Roberts, 1996; Judge & Kammeyer-Mueller, 2012; Ones & Viswesvaran, 1996), I investigate the predictive validity of culture bandwidth on broad and narrow

criteria. This approach is a more thorough test of bandwidth theory and identifies more specifically the conditions in which broad and narrow bandwidths are important for culture research. Fourth, this study advances organizational culture research by taking an integrative perspective on the bandwidth debate through identifying the relative benefits of examining culture at different bandwidths and integrating the findings into promising avenues for future research.

THEORY AND HYPOTHESES

Bandwidth Levels

The bandwidth-fidelity debate in organizational behavior has centered on the appropriate breadth of multidimensional phenomena. The debate is fueled by tradeoffs that narrow and broad approaches incur (Cronbach, 1960). Studying a phenomenon from a narrow bandwidth perspective restricts the theoretical focus to narrowly-defined content. Such an approach endeavors to understand, in detail, the effects of one specific facet of a multifaceted construct. Narrow bandwidth approaches thus increase theoretical precision through enhancing fidelity (i.e., accuracy and reliability; Hogan & Roberts, 1996). Precise measurement, however, comes at the expense of relevance. That is, narrow predictors yield narrow explanations.

Applying a broad theoretical bandwidth to a phenomenon of interest integrates narrowly-defined dimensions into a coherent whole and provides a parsimonious explanation for what the set of dimensions represent and why they should have value, as a whole, in predicting outcomes. Core self-evaluations (Judge, Locke, & Durham, 1997) is a good example in that it represents a broad

personality trait that is comprised of four narrower personality traits: self-esteem, generalized self-efficacy, locus of control, and emotional stability. The four narrow personality traits are thought to be complementary traits that, in combination, influence people's positive self-appraisals. Broad theoretical bandwidth thus advances theory by integrating narrow, but highly interrelated dimensions into a cogent set of variables that illuminate higher-order themes within the larger literature. Parsimonious explanations summarizing a set of narrow dimensions have considerable value for explaining complex phenomena, but parsimony may come at the risk of oversimplifying similarities and differences among interrelated dimensions (Chen, 2012).

Rather than identifying a hierarchical structure predicated on the commonality among dimensions, configurations identify frequently occurring patterns among a set of interconnected dimensions (Short, Payne, & Ketchen, 2008). Each configurational pattern elicits a different profile, or shape, among the dimensions that make it distinctive and unique (Schulte, Ostroff, Shmulyian, & Kinicki, 2009). These configurational patterns account for a greater degree of complexity, enabling researchers to theorize how interconnected dimensions coalesce to influence important criteria. Configurational research applied to the organizational climate literature revealed four climate patterns derived from eight climate dimensions (Schulte et al., 2006). These distinct unit-level climate patterns yielded different relationships with individuals' job satisfaction. Likewise, Toh et al. (2008) found that five human resource practices configurations uniquely explained variance in organizational values and structure.

Configurations lend coherence to a diffuse set of dimensions in a substantially different way than broad dimensions. Accordingly, I contend that configurations extend the traditional bandwidth continuum and yield an informative approach to gaining a more nuanced understanding of complex, multifaceted concepts – such as organizational culture – in organizational research. I now consider the theoretical benefits to investigating organizational culture via narrow and broad bandwidths.

Culture Bandwidth

As noted earlier, organizational culture's theoretical bandwidth ranges from narrow (i.e., specific) culture dimensions to broad culture configurations. To be clear, bandwidths do not presume different levels of analysis. Levels of analysis pertain to culture as an attribute of the organization, strategic group, department, or team. Bandwidth, however, refers to the theoretical scope (i.e., narrow or broad) used to assess culture within a particular level of analysis. For purposes of the current study, I examine organizational culture's bandwidth in the context of bank branches, or the branch level of analysis.

The bandwidth perspective (Cronbach & Gleser, 1965) posits that "the breadth of the criterion one is interested in predicting should dictate the appropriate breadth of the predictor construct" (Carr, Schmidt, Ford, & DeShon, 2003: p. 605). In other words, specific culture dimensions are more appropriate predictors of narrow criteria and should have less value in accounting for variance in broad criteria. In the same way, broad, or gestalt, measures of culture should have unique predictive value for broad criteria but less value in predicting narrow

criteria. To directly test these theoretical suppositions, I assess the incremental predictive validity across culture's bandwidth on broad and narrow criteria. These theoretical tests take an initial step toward enumerating the conditions in which broad and narrow culture bandwidths generate unique insight into explaining organizational criteria. Before I elucidate the theoretical rationale for the criteria of interest, I first describe five specific culture dimensions that comprise organizational culture.

Organizational Culture Dimensions

Widespread agreement about the dimensions underlying organizational culture has been elusive. Detert, Schroeder, & Mauriel (2000) conducted a qualitative content analysis of the extant literature and identified eight general organizational culture dimensions. Others who have developed empirical scales to measure organizational culture have identified seven dimensions (O'Reilly, Chatman, & Caldwell, 1991), six dimensions (Hofstede, Neuijen, Ohayv, & Sanders, 1990), four dimensions (Denison & Mishra, 1995), and three dimensions (Cooke & Rousseau, 1988), respectively. A common unifying theme across the wide range of culture dimensions is how organizations deal with problems pertaining to external adaptation and internal integration, issues central to the content of an organization's culture (Schein, 2010). I consider five culture dimensions that fall within this theme.

The competing values framework (CVF; Quinn & Rohrbaugh, 1983; Cameron & Quinn, 1999; Cameron, Quinn, DeGraff, & Thakor, 2006) highlights four culture dimensions that are explicitly positioned around the extent to which

organizations are externally or internally focused. According to the CVF, two fundamental tensions influence organizational effectiveness. The first tension relates to an organization's focus: *internally* focused organizations concentrate on developing people within the organization whereas *externally* focused organizations concentrate on developing the organization itself (Quinn & Rohrbaugh, 1983). The second tension concerns an organization's structure: *flexibility* (decentralization) and *control* (centralization) (Quinn & Rohrbaugh, 1983). A flexible organization values flexibility and spontaneity whereas a control organization values stability, order, and control. Four dimensions of organizational culture emerge from how organizations manage these competing demands: clan, adhocracy, market, and hierarchy (Cameron & Quinn, 1999).

C*lan* culture juxtaposes an internal focus with flexibility. It emphasizes employee training and development in an effort to improve cohesion, morale, and a sense of trust and belongingness. This dimension highlights teamwork, empowerment, participation, and open communication (Cameron & Quinn, 1999). *Adhocracy* culture combines an external focus with flexibility. It stresses high employee morale but simultaneously values adaptation to the external environment through innovation and development. Key values in the adhocracy dimension include adaptability, visionary communication, flexibility, growth, and creativity (Cameron & Quinn, 1999). *Market* culture is derived from an external focus with a control structure. It values efficiency and productivity and reinforces these values through clear goals, execution, planning, and centralized decision-making (Cameron et al., 2006). *Hierarchy* culture combines a an internal focus

with control structure. This dimension values stability and control and, consequently, emphasizes routinization, formalization, precise communication, and predictable performance outcomes (Cameron & Quinn, 1999).

I selected ethical culture as a fifth dimension of culture because it also deals with issues related to external adaptation and internal integration. For example, fraudulent accounting practices promoted a wave of governmental regulations to increase corporate accountability and transparency (e.g., the Sarbanes-Oxley Act of 2002). This caused organizations to closely monitor and adapt internal processes to comply with said regulations. Furthermore, ethical values are of vital importance to organizations in highly regulated industries such as the banking industry, the context of this study, because ethical violations could have disastrous consequences for numerous stakeholders. Ethical culture is "composed of patterns of shared understandings related to unethical and ethical conduct reflecting the norms, standards, sanctions and rewards applied to behaviors deemed desirable and undesirable in the organization" (Schaubroeck et al., in press: 4). Because ethical values are increasingly at the vanguard of organizational decision-making, I consider ethical culture in addition to the four culture dimensions enumerated by the CVF as specific culture dimensions that are central to organizational culture.

Contrary to culture dimensions, theory does not enumerate which culture configuration patterns exist across organizations or which configurations are most important for organizational outcomes. One reason is that equifinality, or the ability to attain an outcome through multiple paths, is a key concept in

configuration theory (Meyer et al., 1993). Multiple culture configurations may thus have significant relationships with organizational criteria. Consistent with the study's objective of examining culture bandwidth and its consequences for broad and narrow criteria, I examine the ability of the *set* of configurations to predict incremental variance in organizational criteria rather than detailing which specific configuration profiles exist or influence organizational outcomes in the current context.

Criterion Bandwidth

Kopelman, Brief, & Guzzo (1990) and Ostroff et al. (in press) propose similar theoretical process models delineating organizational culture's consequences. They describe organizational climate, employees' cognitive and affective states, and organizational outcomes as formative outputs of organizational culture. Commensurate with organizational culture, these criteria are multifaceted and have narrow and broad theoretical bandwidths (Harrison, Newman, & Roth, 2006; Schneider, Ehrhart, & Macey, 2011). Figure 1 identifies narrow and broad components of climate as well as cognitive and affective states. Branch financial performance is considered exclusively within the broad bandwidth because performance is broad measure that is a product of a wide range of inputs.

Insert Figure 1 about here

To test Cronbach and Gleser's (1965) theoretical proposition that correspondence should exist between predictor and criterion bandwidth, I make

three sets of predictions. The first set of predictions considers the extent to which specific culture dimensions predict narrow criteria. In particular, I draw upon extant theory and empirical evidence to generate hypotheses concerning which specific culture dimension predicts each narrow criterion above and beyond the set of culture dimensions. The second and third sets of predictions are primarily geared toward identifying the conditions in which culture configurations account for variance in narrow and broad criteria above and beyond narrow culture dimensions. Accordingly, I elevate my theoretical discussion to derive predictions about the incremental predictive validity of configurations as a whole. At this level, I am not concerned with which individual dimension or configuration best predicts the outcome. Instead, my chief interest is whether broad culture bandwidth explains unique variance in narrow and broad criteria after accounting for narrow culture bandwidth.

Narrow Culture Bandwidth as a Predictor of Narrow Criteria

Culture and climate. The relationship between organizational culture and organizational climate has long been discussed (Denison, 1996; Ostroff et al., in press), but surprisingly few empirical studies have empirically established the link (see Glisson & James, 2002, for an important exception). Culture encompasses artifacts (i.e., observable behaviors), values, beliefs, and assumptions (Schein, 2010), whereas climate refers to the policies, practices, and procedures within a unit that clarify valued, rewarded, and supported behavior (Kuenzi & Schminke, 2009; Schneider, 1990). Consistent with culture and climate theory, Hartnell et al. (2011) purported that underlying values, beliefs, and assumptions create

normative expectations that guide employees' behavior. Climate is a behavioral manifestation of the organization's underlying values, beliefs, and assumptions (Zohar & Hofmann, in press).

Gonzalez-Roma, Peiro, and Tordera (2002) identified three facets of climate: support, innovation, and goal achievement. *Climate for support* refers to the extent to which supportive relationships exist among unit members. *Climate for innovation* pertains to the degree to which unit members are open to and implement new ideas. *Climate for goal achievement* addresses the extent to which goals are clearly defined and team members aggressively work toward achieving them (Gonzalez-Roma, Fortes-Ferreira, & Peiro, 2009). I examined these three climate dimensions because they are congruent with Ostroff's (1993) organizational climate taxonomy that identified social relationships, individual involvement, and achievement as core themes within organizational policies, practices, and procedures that influence employee attitudes and behavior, and they align theoretically with specific culture dimensions – clan, adhocracy, and market – outlined by the framers of the CVF as central to organizational effectiveness (Quinn & Rohrbaugh, 1983).

Clan cultures value collaboration, trust, and support (Cameron & Quinn, 1999). These values direct employees to build supportive relationships with each other, behaviors characteristic of a climate for support. Adhocracy cultures value growth, autonomy, and attention to detail, resulting in behaviors that emphasize individual involvement, creativity, and adaptability (Quinn & Kimberley, 1984). In the same fashion, market cultures value competition, achievement and meeting

performance goals (Cameron et al., 2006), values that emphasize goal-setting, task focus, and aggressiveness. Climate for goal achievement is thus a product of market cultures. Because climate is the surface manifestation of the organization's values, beliefs, and assumptions, I hypothesize:

Hypothesis 1a: Clan culture is positively associated with climate for support above and beyond other culture dimensions.

Hypothesis 1b: Adhocracy culture is positively associated with climate for innovation above and beyond other culture dimensions.

Hypothesis 1c: Market culture is positively associated with climate for goal achievement above and beyond other culture dimensions.

Culture and cognitive and affective states. Cognitive and affective states encompass how employees interpret and respond to their work role. Research investigating employee engagement, or the degree to which employees invest themselves entirely in the work role, has revealed impressive relationships with task and contextual performance, underscoring engagement's motivational role in affecting employee behavior (c.f., Christian, Garza, & Slaughter, 2011; Rich, LePine, & Crawford, 2010). Job attitudes also have well-documented effects on task-oriented and contextual-oriented facets of performance (Harrison et al., 2006). Consistent with extant research, Kopelman et al.'s (1990) theoretical process model incorporated work motivation and satisfaction as fundamental components underlying employees' cognitive and affective states. In line with theory and empirical evidence, I investigated engagement for service, affective commitment, and supervisor satisfaction as three narrow features of cognitive and

affective states. Engagement for service is defined as employees' investment of physical, emotional, and cognitive energies in the performance of customer service (Macey, Schneider, Barbera, & Young, 2009). Market cultures are explicitly focused on anticipating, meeting, and exceeding customers' needs (Cameron et al., 2006). Hartnell et al. (2011: 681) opine "market cultures maintain an external focus on customers and competitors to garner the competitive foresight needed to anticipate customers' evolving needs, standards, and expectations." Consequently, organizations with market cultures are expected to set customer service oriented goals. They also direct employees' attention and effort toward customers through establishing normative expectations and rewards focused on customer service (Hartnell et al., 2011). I thus predict:

Hypothesis 1d: Market culture is positively associated with engagement for service above and beyond other culture dimensions.

Affective commitment refers to employees' emotional attachment and identification to the organization (Allen & Meyer, 1990; Meyer & Allen, 1984; Meyer, Stanley, Herscovitch, & Topolnystky, 2002). Supervisor satisfaction pertains to the amount of respect, support, and guidance that employees receive from their supervisors. Clan cultures value attachment, affiliation, and support, values that encourage organizational members to participate in decision-making, teamwork, and backup behavior. In organizations with clan cultures, leaders (as organizational representatives) are expected to model clan values by supporting their employees and encouraging their involvement in the unit. Supportive and inclusive leadership behaviors promote feelings of membership in the

organization and develop positive affective attitudes toward unit members. Indeed, the degree to which leaders show concern and respect as well as express support for followers is positively associated with followers' satisfaction with the leader (Judge, Piccolo, & Ilies, 2004). Further support reveals that clan cultures are associated more strongly with affective employee attitudes than adhocracy and market cultures (Hartnell et al., 2011). Taken together, I propose:

Hypothesis 1e: Clan culture is positively associated with affective commitment above and beyond other culture dimensions.

Hypothesis 1f: Clan culture is positively associated with supervisor satisfaction above and beyond other culture dimensions.

Narrow and Broad Culture Bandwidth's Incremental Predictive Validity

Narrow criteria. Bandwidth theory (Cronbach, 1960) suggests that the breadth of the criterion should determine the appropriate breadth of the predictor. Similarly, Judge and Kammeyer-Mueller (2012: 169) recommend "if there are multiple subcomponents in a contstruct on the criterion side, a predictor with multiple subcomponents should be employed. If, on the other hand, the criterion is unidimensional, a unidimensional predictor is likely to be more predictive." Configurations, or patterns among culture dimensions, should have little predictive value for narrow criteria because the outcomes should be explained best by dimensions that share the most conceptual space (i.e., see predictions relating to narrow culture bandwidth). Consistent with bandwidth theory and subsequent recommendations, I predict that culture configurations will not explain

criterion variance in narrow outcomes beyond that of the set of specific culture dimensions.

Null hypotheses are uncommon in organizational research, but they are justified when they are based on a priori, theoretical grounds (c.f., Cashen & Geiger, 2004; Cortina & Folger, 1998). I explicitly propose theoretically based null hypotheses to gain a more complete picture of the culture bandwidth's incremental predictive validity across narrow and broad criteria. These null hypotheses thus offer a more robust test of Cronbach's (1960) theoretical proposition by illuminating the boundary conditions in which culture configurations predict unique variance in narrow and broad criteria. Based on the preceding arguments, I hypothesize:

Hypothesis 2a: Culture configurations are not associated with climate for support above and beyond culture dimensions.

Hypothesis 2b: Culture configurations are not associated with climate for innovation above and beyond culture dimensions.

Hypothesis 2c: Culture configurations are not associated with climate for goal achievement above and beyond culture dimensions.

Hypothesis 2d: Culture configurations are not associated with engagement for service above and beyond culture dimensions.

Hypothesis 2e: Culture configurations are not associated with affective commitment above and beyond culture dimensions.

Hypothesis 2f: Culture configurations are not associated with supervisor satisfaction above and beyond culture dimensions.

Broad criteria. In addition to bandwidth arguments previously articulated, culture configurations are expected to predict unique variance in broad criteria because the outcomes are multidimensional. By definition, narrow culture dimensions do not share as much conceptual space with multidimensional criteria as they do with narrow criteria. Instead, non-linear combinations of values, or the pattern of culture values, are likely to explain additional differences in overall climate, engagement, employee attitudes, and firm performance. It is the complex, interactive influence of all culture dimensions combined that yields unique predictive value for broad outcomes. For these reasons, in addition to predictions and theoretical suggestions derived from bandwidth theory, I propose:

Hypothesis 3a: Culture configurations are associated with team climate above and beyond culture dimensions.

Hypothesis 3b: Culture configurations are associated with team engagement above and beyond culture dimensions.

Hypothesis 3c: Culture configurations are associated with positive employee attitudes above and beyond culture dimensions.

Hypothesis 3d: Culture configurations are associated with financial performance above and beyond culture dimensions.

METHODS

Procedures and Sample

Electronic surveys were administered to 811 employees from 142 branches in a regional bank located in the midwestern United States. Following Dillman's (2007) method to enhance response rates among organizational

members, electronic reminders were sent to employees who had not yet completed the survey. Participants consisted of 567 employees within 130 bank branches, representing a 69.9% response rate. Employees were told that their responses were confidential and that participation was voluntary. Surveys were completed during company time.

Bank branches averaged 6.6 employees per branch, and the average number of respondents per branch was 4.4. 94.3% of the respondents were women and 69.7% completed some college or had a university degree. The average age among participants was 36.8 years, and they worked in their current position at the bank for 2.4 years.

Data were collected at two points in time to reduce common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). At time 1, surveys were distributed electronically to branch employees. Branch employees assessed branch culture, climate, engagement, and employee attitudes (e.g., supervisor satisfaction, affective commitment, & job satisfaction). At time 2, approximately one month after survey administration, the sponsoring organization supplied objective performance measures for each branch.

Measures

This section begins by discussing the measurement of branch culture and the establishment of culture configurations before reviewing the details pertaining to narrow and broad criteria, respectively. All variables in the study were measured at the branch level of analysis.

Branch culture dimensions. Thirty culture items were derived from Kinicki, Ostroff, and Schulte (working manuscript), who conducted focus groups among 65 employees in a large, southwestern bank to identify culture values relevant for their branch. Kinicki et al. presented employees with 54 value statements derived from the Organizational Culture Profile (OCP; O'Reilly et al., 1991). The employees identified 20 of these values as having face validity within their branch. They also identified 11 additional value statements that were relevant. Given the similar research context, I used Kinicki et al.'s 31 value statements as a basis to assess branch culture.

Because the purpose of this study was to investigate culture bandwidth and its effects on unit outcomes, I classified the 31 value statements into a taxonomy of organizational culture using the CVF. This examination resulted in adding six additional value statements that relate to internal organizational functions (e.g., being rule oriented, predictability, collaboration, and commitment to people). Adding these items is consistent with the idea that culture represents specific properties of an organization (Schein, 1991) that can be difficult to imitate (Barney, 1991), thereby necessitating the use of customized measures (Sackman, 2011). Taken together, the 37 values statements incorporate a wider range of values that depict predominant dimensions in the OCP and the CVF (O'Reilly et al., 1991; Cameron & Quinn, 1999).

Two subject matter experts independently categorized the 37 value statements into common themes to make a priori predictions concerning culture dimensions and narrow criteria. The raters used the CVF as a guide to categorize

value statements because it is a broad culture archetype with clear theoretical distinctions among culture dimensions that have unique predictive validity for organizational criteria (c.f., Hartnell et al., 2011). Moreover, OCP culture dimensions fit well within the CVF's taxonomy (see Hartnell et al., 2011 for a list of culture dimensions commensurate with those of the CVF). Values that did not clearly fit within the CVF were classified into different thematic dimensions. The raters' initial assessments resulted in 85% agreement. The raters met to discuss the differences in their categorizations until they reached consensus. This process resulted in identifying five culture types: clan, adhocracy, market, hierarchy, and ethical cultures. Seven value statements were dropped from further consideration because they were ambiguous and did not fit clearly within the five dimensions' content domain. Although ethical culture is not a formal aspect of the CVF, it is not surprising that ethical values arose from focus groups as being important to branch functioning in the highly regulated banking industry. All told, 30 value statements were used in all subsequent analyses.

Respondents indicated the extent to which their branch supported each of the value statements on a five-point Likert scale ranging from 1 (*very little extent*) to 5 (*very great extent*). *Clan culture* (five items) is centered on supporting employees and facilitating open communication and employee involvement (Cameron & Quinn, 1999). Sample items are "Being supportive," "Commitment to people," and "Being team oriented." Coefficient alpha for the 5-item scale was .88. *Adhocracy culture* (six items) challenges employees to be creative and take risks to attain the unit's ideals and vision (Quinn & Kimberly,

1984). Adhocracy culture thus incorporates values such as "Adaptability," "Flexibility," and "Being distinctive/different from others." Coefficient alpha for the 6-item scale was .80. *Market culture* (seven items) is achievement-focused and emphasizes clear goals to competitively and aggressively anticipate and meet customers' needs (Hartnell et al., 2011). Sample items include "Being competitive," "Having high expectations for performance," and "Providing excellence in client service." Coefficient alpha for the 7-item scale was .90. *Hierarchy culture* (seven items) centers on establishing routine policies and procedures to enhance organizational efficiency (Cameron & Quinn, 1999). Sample items are "Being rule oriented," "Predictability," and "Stability." Coefficient alpha for the 7-item scale was .85. *Ethical culture* (five items) focuses on doing the right thing for the organization and its stakeholders. Unethical decisions are thus more likely to be identified and punished by external stakeholders. Ethical culture items include, "Having a good reputation," "Honesty," and "Integrity." Coefficient alpha for the 5-item scale is .88.

Culture Configurations. I conducted cluster analysis based on 30 value statements that compose clan, adhocracy, market, hierarchy, and ethical cultures. Cluster analysis identifies relatively homogenous groups that share similar characteristics (Aldenderfer & Blashfield, 1984). Ward's method of agglomeration was used to identify distinct clusters because it maximizes the distance between clusters and minimizes variance within clusters, facilitating the interpretation of results (Toh, Morgeson, & Campion, 2008). Ward's method is one of the most commonly used statistical methods in configuration research (c.f.,

Leask & Parker, 2007; Short, Payne, & Ketchen, 2008). A marked change in the agglomeration coefficient suggested a four-cluster solution. I also examined three- and five-cluster solutions to evaluate alternative solutions. A five-cluster solution resulted in one organization being classified to the fifth cluster, suggesting that a fifth cluster did not exist in the data. In the three-cluster solution, the third cluster (N=46) combined organizations that belonged to two different clusters in the four-cluster solution (N=30 & N=16, respectively). I thus chose to retain the four-cluster solution to further differentiate branches based on their pattern of values. Bank branches were assigned to one of the cluster groups. The first configuration was labeled *moderate culture* because it represented branches with a moderate level of all five culture dimensions. Branches belonging to the second configuration, *comprehensive culture,* had high scores across dimensions relative to all branches within the sample. The *moderate-low culture* configuration contained branches with culture values slightly below the average for all bank branches. A *deprived culture*, however, included branches with significantly lower culture values relative to other branches. The four configurations were dummy-coded for analysis.

Climate for support. Gonzalez-Roma, Fortes-Ferreira, and Peiro's (2009) 4-item measure was used to assess climate for support. Using a response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) branch employees were asked to rate the extent to which statements were characteristic of their branch. Sample statements include "The branch manager contributes to creating a friendly

and cordial work climate" and "You can tell that the branch is interested in the employees." Coefficient alpha for the 4-item scale was .91.

Climate for innovation. Four items developed by Gonzalez-Roma et al. (2009) were used to measure climate for innovation. Sample items are "Employees take advantage of their knowledge and skills to develop new ways of working, new services or new products" and "New ideas are put into practice to improve the work and its results." The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Coefficient alpha for the 4-item scale was .89.

Climate for goal achievement. Climate for goal achievement was measured with Gonzalez-Roma et al.'s (2009) four-item scale (). Using a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), employees rated, for example, the extent to which "Employees try hard to reach the branch's goals" and "Everyone contributes enthusiastically to reaching the branch's goals." Coefficient alpha for the 4-item scale was .88.

Engagement for service. Macey, Schneider, Barbera, and Young's (2009) six-item scale was used to measure engagement for service. Respondents used a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) to evaluate service engagement among employees within their branch. Sample items were: branch employees "Maintain their focus on customer service even when they encounter potential distractions" and "Devote a lot of energy to serving customers." Coefficient alpha for the 6-item scale was .96.

Affective commitment. Affective commitment was measured using a 4-item scale developed by Allen and Meyer (1990). Using a Likert scale ranging

from 1 (*strongly disagree*) to 5 (*strongly agree*) branch employees were asked, for example, to rate the extent to which "This branch has a great deal of personal meaning to me" and "I feel 'emotionally attached' to this branch." Coefficient alpha for the 4-item scale was .92.

Supervisor satisfaction. A 3-item scale derived from Hackman and Oldham's (1975) Job Diagnostic Survey (JDS) was used to measure supervisor satisfaction. Branch employees were asked to rate their level of satisfaction with their branch manager using a five-point Likert scale ranging from 1(*very dissatisfied*) to 5 (*very satisfied*). Sample items include "The degree of respect and fair treatment I receive from my branch manager" and "The amount of support and guidance I receive from my branch manager." Coefficient alpha for the 3-item scale was .95.

Team climate. The broad construct of team climate was assessed with 12 items that Gonzalez-Roma et al. (2009) used to measure climate for support, climate for innovation, and climate for goal achievement. These climate dimensions describe team behaviors associated with policies, practices, and procedures. Responses were obtained on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Branch employees were asked, for example, to rate the extent to which, "The branch focuses on the welfare of its employees," "The development of new methods, products or services is often proposed," and "Employees aspire to achieving greater performance," Coefficient alpha was .92.

Team engagement. This broad construct was measured with 16 items from Salanova, Schaufeli, Llorens, Peiro, & Grau's (2001) Utrecht Work Engagement Scale (UWES). The items assessed three underlying dimensions of work engagement: (1) vigor (five items), (2) dedication (five items), and (3) absorption (six items). Two items were dropped due to poor item reliability, resulting in a 14-item measure. The referent for the team engagement measure was all branch employees. Using a response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), branch employees were asked, for example, to rate the extent to which, "Employees are very resilient when they are working," "Employees are proud of the work they do," "Employees are immersed in their work." Coefficient alpha for the 14-item scale was .90.

Positive employee attitudes. Following the lead of Harrison, Newman, and Roth (2006)_, positive employee attitudes were operationalized as a broad construct by combining Hackman & Oldham's (1980) 3-item general satisfaction measure with Allen and Meyer's (1990) 4-item measure of affective commitment. Harrison et al. posited that job satisfaction and affective commitment were broad attitudes that develop from the aggregate work context and thus result in a wide array of behaviors directed toward one's omnibus set of work-related behaviors. For example, branch employees were asked to rate the extent to which they agree with the following statements, "Generally speaking, I am very satisfied with my job" and "I feel a strong sense of 'belonging' to this branch." The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Coefficient alpha for the 7-item scale was .92.

Financial performance. The sponsoring organization supplied objective performance data for each branch. Fee income was used to measure branch financial performance because it is a function of services provided directly by branch employees. For instance, banks acquire consumer loans through interactions between branch employees and customers. Fee income is generated, in part, due to profit derived from these consumer loans. Fee income is thus a facet of branch performance amenable to influence from branch employees. I log transformed fee income to normalize the variance across branches due to branch size.

Control variable. The size of the branch could influence its performance because larger branches offer more services to customers. Consequently, I controlled for branch size, measured by the number of employees within the branch, in all analyses.

RESULTS

The means, standard deviations, and correlations of branch size (control), culture dimensions, culture configurations, narrow criteria, and broad criteria are provided in Table 1. The hypothesized relationships were tested using hierarchical linear regression. I first report results regarding aggregation. I then turn to results from confirmatory factor analyses on broad criteria to evaluate the fit of second-order models. Next, hypotheses regarding narrow culture bandwidth as well as the incremental predictive validity of dimensions and configurations on narrow and broad outcomes are then considered. These analyses are followed by a post-

hoc investigation into which configuration profile characteristics explained variance in broad outcomes.

Insert Table 1 about here

Aggregation Tests

All variables, except employee attitudes, contained the 'branch' as the referent and were aggregated using the referent-shift consensus composition model (Chan, 1998). Employee attitudes (e.g., affective commitment, supervisor satisfaction, & positive employee attitudes) were aggregated using the direct consensus composition model. In both composition models, measures should exhibit adequate between-unit variability and within-unit agreement to justify aggregation to the branch level (Klein et al., 2000). I assessed between unit variability by conducting one-way analysis of variance (ANOVA), using the branch as the independent variable. Table 2 indicates that ANOVAs for all variables were significant ($p<.05$), suggesting that meaningful differences exist in employees' ratings across branches.

Insert Table 2 about here

I also calculated interrater agreement ($r_{wg(j)}$; James, Demaree, & Wolf, 1984), and intraclass correlation coefficients [ICC (1) & ICC (2)] to assess whether sufficient within-unit agreement existed to justify aggregating culture and its criterion to the branch level. ICC (1) reports the proportion of variance due to branch membership. ICC (2) indicates the reliability of branch means (Bliese,

2000). Table 2 summarizes interrater agreement and rater reliability for all measures. The culture dimensions, narrow criteria, and broad criteria all exhibited acceptable levels of within-unit agreement with $r_{wg(j)}$ values ranging from .78 to .96 and a median value of .92. $R_{wg(j)}$ values greater than .70 are recommended to support aggregation (James et al., 1984). ICC (1) values for all measures ranged from .06 to .42, with a median value of .21, further supporting aggregation. ICC (2) values ranged from .23 to .66 with a median value of .49. ICC (2) values above .70 are desirable, because lower values increase the difficulty of detecting significant relationships (Chen & Bliese, 2002; Klein et al., 2000). Despite the relatively low reliability in group means, all of the measures exhibited high levels of agreement among employees within a branch. Taken together, the aggregation statistics provide support for aggregating culture dimensions, narrow criteria, and broad criteria to the branch level.

Confirmatory Factor Analyses on Broad Criteria

I specified several models using confirmatory factor analysis (CFA) to assess if the broad outcomes could be classified as omnibus, higher-order constructs. First, I evaluated the structure of the team climate scale by fitting the scale's twelve items to a one-factor model in which all items loaded onto a single factor. As noted in Table 3, CFA results indicated poor fit to the data χ^2 (54, N = 130) = 667.55, $p < .05$; NNFI = .46; CFI = .56; IFI = .57; SRMR = .15; indicating that the items did not reflect a single team climate factor. I then specified a second-order model in which the team climate items were loaded onto their three respective first-order dimensions. These three dimensions were subsequently

loaded onto a second-order team climate dimension. The second-order team climate model fit the data well, χ^2 (51, N = 130) = 129.42, p < .05; NNFI = .93; CFI = .94; IFI = .95; SRMR = .10; and fit significantly better than the model in which the all team climate items loaded on a single latent variable, $\Delta\chi^2$ (3, N = 130) = 538.13, p < .01 (see Table 3). It is important to note that the second-order model yielded the exact same fit with the data as did the three-factor model in which the climate items were loaded onto their corresponding dimensions. These identical fit statistics are due to an equal number of estimated endogenous relationships and equivalent degrees of freedom. I specified team climate as a second-order factor because the three first-order dimensions loaded significantly and positively on the second-order factor (average = .71), lending support for team climate as a higher-order construct. I thus averaged all twelve items to represent the branch's overall team climate.

Insert Table 3 about here

Following the procedure outlined above, team engagement's fourteen items were loaded onto a single factor model. As reported in Table 3, the results of the one-factor model yielded poor fit to the data, χ^2 (65, N = 130) = 317.83, p < .05; NNFI = .71; CFI = .76; IFI = .76; SRMR = .11. A second-order model in which items were loaded onto three first-order dimensions and then onto a higher-order team engagement dimension fit the data moderately well, χ^2 (62, N = 130) = 165.82, p < .05; NNFI = .88; CFI = .90; IFI = .90; SRMR = .07; and improved model fit over the single factor model, $\Delta\chi^2$ (3, N = 130) = 152.01, p < .01. Once

again, the second-order model and three-factor models exhibited equivalent fit. The three first-order factors, however, loaded significantly and positively onto the higher-order team engagement factor (average = .75), yielding support for combining three team engagement dimensions into a second-order factor. Consequently, fourteen items were averaged to yield a composite measure of team engagement.

Consistent with Harrison et al. (2006), Table 3 indicates support for combining job satisfaction and affective commitment into a higher-order factor, positive employee attitudes. CFA results revealed that the single factor model fit the data poorly, χ^2 (14, N = 130) = 426.60, p < .05; NNFI = .41; CFI = .61; IFI = .61; SRMR = .16. In contrast, the second-order factor model, whereby seven items were loaded onto two first-order dimensions that were subsequently loaded onto a higher-order factor, fit the data well, χ^2 (12, N = 130) = 40.88, p < .05; NNFI = .95; CFI = .97; IFI = .97; SRMR = .03. In addition, the second-order factor model was a significantly better fit to the data than than the single factor model, $\Delta\chi^2$ (2, N = 130) = 385.72, p < .01. Unlike team climate and team engagement, positive employee attitude's second-factor model and two-factor model differed by a degree of freedom (df = 12 and df = 13, respectively). Despite the difference in estimated parameters, both models exhibited virtually identical fit to the data, $\Delta\chi^2$ (1, N = 130) = 0.00, p > .05. Because the two underlying dimensions loaded significantly and positively onto the second-order factor (average = .81), I specified positive employee attitudes as a higher-order

construct. Based on these results, I averaged seven items as a measure of positive employee attitudes.

Narrow Culture Bandwidth

Table 4 shows the results of the regression analyses for clan culture's effect on narrow criteria. The control variable, branch size, was entered in the first step, followed by the set of four culture dimensions (i.e., adhocracy, market, hierarchy, & ethical) in step two. Finally, clan culture was entered in the third step to assess if clan culture explains additional variance. As predicted, clan culture was positively related with climate for support, affective commitment, and supervisor satisfaction, and the change in R^2 was significant. Table 4 indicates that clan culture explained a significant amount of additional variance in climate for support, affective commitment, and supervisor satisfaction (ΔR^2 = .09, p<.01; .05, p<.01; & .07, p<.01, respectively). Hypotheses 1a, 1e, and 1f were thus supported.

Insert Table 4 about here

Table 5 reveals the results of the incremental predictive validity of adhocracy culture on climate for innovation (Hypothesis 1b) as well as market culture on climate for goal achievement (Hypothesis 1c) and engagement for service (Hypothesis 1d). After accounting for the effects of branch size and four culture dimensions, adhocracy culture was not significantly associated with climate for innovation. Hypothesis 1b was not supported. In contrast, market culture was significantly related with engagement for service and climate for goal

achievement after accounting for branch size and four culture dimensions. More specifically, the change in R^2 was significant as market culture predicted additional variance in climate for goal achievement and engagement for service (ΔR^2 = .14, p<.01; & .04, p<.01, respectively). Hence, Hypotheses 1c and 1d were supported.

Insert Table 5 about here

With exception to innovation culture, results supported the incremental predictive validity of specific culture dimensions on narrow criteria. Tables 4 and 5 indicate, however, that at least one other culture dimension was significantly associated with the narrow criteria in the second step of all six analyses. For instance, ethical culture was positively related with affective commitment, supervisor satisfaction, climate for support, engagement for service, and climate for goal achievement. These findings, along with the strong positive correlations among culture dimensions (see Table 1), raise the possibility that another culture dimension might also predict unique variance in narrow criteria after controlling for the effect of the other four dimensions. I thus reversed the second and third steps in the regression equation for all six hypotheses to investigate this possibility. That is, I entered the a priori hypothesized culture dimension into the second step and then entered the four culture dimensions into the third step. In the five analyses with supported hypotheses, the effect of the a priori culture dimension was significant, but none of the four dimensions entered in the third step were significantly associated with the narrow criteria. Furthermore, the R^2

change was insignificant, indicating that the set of four dimensions did not explain unique variance beyond the predicted dimension. Consequently, supplementary analyses yielded further support for Hypotheses 1a, 1c, 1d, 1e, and 1f. Further analysis of the unsupported hypothesis (Hypothesis 1b) revealed that innovation culture was significantly associated with climate for innovation. Not surprisingly, the set of four culture dimensions predicted additional variance in this criterion.

Incremental Predictive Validity of Dimensions and Configurations

Narrow criteria. The second set of hypotheses predicted that culture configurations do not explain variance in narrow criteria above and beyond the set of culture dimensions (Hypotheses 2a – 2f). To test these hypotheses, branch size was entered in the first step of the regression equation, the set of five culture dimensions were entered in the second step, and the set of configurations were entered last. As predicted, regression results shown in Table 6 indicate that culture configurations did not predict variance beyond the set of culture dimensions for climate for support, climate for innovation, engagement for service, affective commitment, and supervisor satisfaction. Hypotheses 2a, 2b, 2d, 2e, and 2f were thus supported. Contrary to expectations, configurations predicted a significant amount of variance in climate for goal achievement beyond branch size and the set of culture dimensions ($\Delta R^2 = .08$, $p<.01$). Therefore, Hypothesis 2c was not supported.

Insert Table 6 about here

Broad criteria. I predicted that culture configurations explain variance in broad criteria above and beyond culture dimensions (Hypotheses 3a – 3d). Regression analyses were conducted with branch size entered in step one, the set of culture dimensions entered in step two, and the set of configurations entered in step 3. Table 7 reveals that the set of culture dimensions were significantly associated with team climate, team engagement, and positive employee attitudes. As predicted, culture configurations explained unique variance in these broad outcomes (ΔR^2 = .04, p<.01; .09, p<.01; & .06, p<.01; respectively). Hypotheses 3a, 3b, and 3c were thus supported. In contrast, Hypothesis 3d, regarding financial performance, was not supported. Branch size was significantly related with performance, and the set of culture dimensions explained additional variance. The set of configurations, however, failed to predict incremental variance in firm performance.

Insert Table 7 about here

Post Hoc Analyses

Due to configurations' incremental predictive validity on broad criteria, I conducted follow-up post hoc analyses to identify which configuration characteristics were significantly associated with broad criteria. Schulte, Ostroff, Shmulyian, & Kinicki (2009) identified three configuration characteristics: elevation, variability, and shape. Elevation refers to the average score across

culture dimensions, and variability refers to the variance in culture dimensions. Shape refers to the overall profile of, or pattern among, the culture dimensions (Ostroff et al., 2009). Whereas elevation is approximately equivalent to controlling for the five culture dimensions upon which the configurations were derived, variability and shape may offer unique insight into the nature of the relationship between culture configurations and broad outcomes.

Regression analyses were conducted in which I entered branch size in the first step, elevation into the second step, variability into the third step, and shape into the fourth step. Table 8 shows that shape predicted additional variance in team climate, team engagement, and positive employee attitudes after accounting for branch size, elevation and variability, whereas variability was not significantly associated with these broad criteria. Conversely, variability predicted variance in financial performance beyond branch size and elevation. Shape, however, was not related with financial performance. Taken together, the post hoc analyses indicate that variability and shape have a unique role, beyond elevation, in explaining variance in broad criteria. These analyses thus illuminate the configuration facets that undergird the relationship between culture configurations and broad criteria.

Insert Table 8 about here

DISCUSSION

Bandwidth theory advocates that the breadth of the criterion should dictate the breadth of the predictor (Cronbach & Gleser, 1965). Although this principle

has become axiomatic, it spurred two separate streams of research that have fragmented the overall pattern of evidence regarding bandwidth of constructs in I/O psychology. Researchers with a proclivity toward narrow bandwidths identify narrowly-defined facets of the overall phenomenon and are interested in predicting narrow criteria. Broad bandwidth adherents, on the other hand, develop broader conceptualizations that account for the phenomenon's breadth and multidimensionality and are primarily concerned with predicting broad criteria. Rather than adopting a dichotomous position, I aim to integrate these perspectives in the organizational culture domain by identifying *when* one should adopt a broad or narrow perspective to investigate culture.

Using a lagged, objective measure of financial performance and survey data collected from 567 employees in 130 bank branches, I explored the incremental predictive validity of broad (i.e., configurations) culture bandwidth beyond narrow (i.e., dimensions) culture bandwidth on broad and narrow criteria. Results from hierarchical linear regressions support the majority of the hypotheses across three sets of predictions. First, the overall pattern of results indicates that specific culture dimensions predict unique variance in narrow criteria above and beyond the other culture dimensions. Second, culture configurations do not explain unique variance in narrow criteria above and beyond culture dimensions. Third, culture configurations account for unique criterion variance above and beyond culture dimensions in broad criteria. These findings have several theoretical implications and corresponding avenues for future research.

Theoretical Implications

I extend the broad end of the bandwidth continuum by considering configurations. Configurations extend the bandwidth continuum by considering patterns of commonly occurring characteristics (Meyer et al., 1993), and they account for unique criterion variance because they have characteristics that are partly independent of their component dimensions. Three profile characteristics include elevation, variability, and shape (Schulte et al., 2009). Although elevation closely approximates controlling for the set of underlying culture dimensions, variability and shape account for differences among culture dimensions. Illuminating the differences among culture dimensions is critically important to understanding culture as a gestalt. Organizations may have a predominant culture, but they also incorporate other values, beliefs, and assumptions to varying degrees. Denison and Spreitzer (1991) aptly noted that organizations with narrow values, beliefs, and assumptions are likely to be dysfunctional. Instead, organizations must blend a diverse set of values to effectively address competing demands (Cameron & Quinn, 1999; Cameron et al., 2006). For this reason, organizational culture theory considers organizational culture to be a holistic phenomenon that is comprised of a *pattern* of culture values (Denison & Spreitzer, 1991; Trice & Beyer, 1993). Taken together, this study's results substantiate the importance of configurations for organizational culture in particular and bandwidth theory in general.

An extended approach to the bandwidth continuum has the potential to yield fruitful advances in streams of research faced with similar bandwidth issues

(e.g., personality, organizational climate, leadership, job attitudes, etc.) through further integrating theoretically important characteristics. For example, configurations may illuminate new patterns of leadership behaviors that integrate transformational, task and relationship, servant, and authentic leadership in predicting organizational and employee outcomes. These leadership configurations have the potential to identify the degree to which leaders simultaneously engage in task-, relationship-, and change-oriented behaviors and their implications for unit performance (Burke, Stagl, Klein, Goodwin, Salas, & Halpin, 2006; DeRue, Nahrgang, Wellman, & Humphrey, 2011). Indeed, preliminary evidence indicates that leaders who adopt a broad behavioral repertoire (i.e., high behavioral complexity) have the strongest effect on managerial and organizational effectiveness (Hart & Quinn, 1993; Lawrence, Lenk, & Quinn, 2009). Similar to leadership research, the personality literature can benefit from an extended bandwidth by incorporating the Big 5 personality dimensions (i.e., extraversion, agreeableness, conscientiousness, emotional stability, and openness) into configurations. Much like an organization's culture is composed of multiple values, an individual's personality is comprised of multiple personality dimensions. Configurations may thus have significant import for generating novel insights into systematically identifying a set of generalizable, gestalt personality profiles that have unique implications for individuals' performance.

The study's second theoretical implication is that the bandwidth-fidelity 'dilemma' (Ones & Viswesvaran, 1996) may not be such a dilemma, after all.

Whereas researchers have traditionally advocated a dichotomous position (i.e., broad *or* narrow) on a given phenomenon (Ashton, 1998; Hogan & Roberts, 1996; Ones & Viswesvaran, 1996), I took an integrative approach by considering the relative impact of broad *and* narrow culture perspectives on a range of organizational criteria. Results indicate that both broad and narrow bandwidth approaches are complementary perspectives that shed unique insight into the organizational culture phenomenon. Specific dimensions (i.e., the trees) infuse meaning into what culture is and offers predictive validity for narrow outcomes. Broad configurations (i.e., the forest) organize the dimensions into a coherent whole, shed light on culture's theoretical breadth, and explain unique variance in broad outcomes. The relative benefits of each approach outlined in this study offer initial evidence toward reframing the central question undergirding the bandwidth-fidelity conversation from *if* one should measure broad or narrow constructs to *when* one should measure broad or narrow constructs (Judge & Kammeyer-Mueller, 2012).

In line with bandwidth theory (Cronbach & Gleser, 1965), this study's pattern of results suggest that the breadth of the criterion should dictate when predictors should be measured broadly (i.e., configurations) or narrowly (i.e., dimensions). Applied broadly, leadership configurations may offer greater predictive utility for complex, multifaceted unit outcomes such as performance or customer satisfaction than narrow leadership behaviors emphasizing charisma, empowerment, initiating structure, or consideration. On the other hand, specific leadership approaches wield considerable value in predicting employees' specific

cognitive and affective states (Judge & Piccolo, 2004; Judge et al., 2004). Applied specifically to organizational culture, this study's findings indicate that researchers who are interested in predicting broad, multidimensional outcomes should apply culture configurations because patterns of values, beliefs, and assumptions offer unique predictive value. On the other hand, culture dimensions should be used to explore facet-specific relationships between culture and narrow criteria. Although this maxim is generally supported, three unsupported hypotheses reveal deeper theoretical implications.

Despite adhocracy culture's positive correlation with climate for innovation, it did not predict unique criterion variance after controlling for four other culture dimensions. On the surface, one might expect values that underscore adaptability, flexibility, and distinctiveness to be related to policies and practices that encourage and support innovation. A deeper inspection, however, reveals the importance of clannish team processes such as collaboration, support, and commitment, for creativity and innovation. Extant research indicates that supervisor support (Amabile, Schatzel, Moneta, & Kramer, 2004), participation in decision-making (De Dreu & West, 2001), and organizational commitment (Ng, Feldman, & Lam, 2010) play an important role in fostering creativity and innovation. Consequently, as evidenced in this study, clan cultures may provide deeper, underlying values that foster employees' openness to listen to and implement new ideas. In support of these assertions, post hoc analyses revealed that clan culture explained unique variance in climate for innovation above and beyond the other four culture dimensions. Results also indicated that

the other four culture dimensions did not account for unique criterion variance after controlling for clan culture. In sum, these explanations and subsequent analyses underscore the importance of accounting for alternative culture dimensions in facet-specific research. Theoretically relevant culture dimensions may explain more substantive variance in narrow criteria than the focal dimensions in question, casting uncertainty about the internal validity of an individual study. Consequently, future research investigating narrow culture dimensions' association with narrow criteria should be particularly attuned to internal validity issues to rule out alternative explanations.

The second unsupported hypothesis indicates that culture configurations account for unique variance in climate for goal achievement, a narrow criterion. Hence, culture configurations may have some predictive utility for narrow outcomes. Climate for goal achievement is characterized by employees' aspirations and willingness to contribute to reaching the unit's goals. The mechanisms propelling employees to work toward unit goals, however, may reflect a combination of factors. Market culture values, for example, motivate employees through emphasizing achievement and tying valued inducements to performance (Hartnell et al., 2011). Clan culture values, however, motivate employees through fostering a relationship-focused atmosphere geared toward collaboration, participation, and affiliation (Cameron & Quinn, 1999; Quinn & Kimberly, 1984), values that build employees' positive self-concept and facilitate their identification with the work unit. Work-unit identification enhances employees' beliefs about their ability to contribute to unit goals and motivates

them to transcend their individual interests and work toward collective outcomes (Kark, Shamir, & Chen, 2003; Olkkonen & Lipponen, 2006). Likewise, ethical culture values compel employees to action through advocating that they take individual responsibility and develop a good reputation. Taken together, market, clan, and ethical values motivate employees to achieve unit goals for different reasons. These values likely coalesce to influence employees' desire to work toward achieving unit goals. Consequently, culture configurations offer a multifaceted explanation that explains why combinations of values account for unique variance in climate for goal achievement above and beyond the set of culture dimensions. This explanation suggests that future research needs to carefully consider diverse theoretical lenses that explain why different culture dimensions should be associated with narrow criteria. As illustrated by climate for goal achievement, configurations may account for additional variance in a narrow criterion when theory indicates that multiple culture dimensions are related with it.

Despite support for the majority of hypotheses linking culture configurations to broad outcomes, culture configurations failed to explain unique variance in financial performance beyond the set of culture dimensions. There are three plausible explanations for this result. First, the study's sample consisted of 130 branches within one regional bank. Branch performance may not vary as widely within the bank as it might between banks, constraining variance and mitigating the potential of detecting a significant effect. Second, organizational culture theory suggests that the link between organizational culture and firm

performance is distal and operates through mediating mechanisms such as climate, employee attitudes, and employee behavior (Kopelman et al., 1990; Ostroff et al., in press). As a result, extant mediating mechanisms exist that attenuate the magnitude of the relationship between culture and branch performance. Third, congruence between organizational culture and other aspects of the work context (e.g., HR practices and organizational climate) may be needed to detect variance in financial performance. Congruence between culture, HR practices, and climate sends consistent cues to employees about valued, rewarded, and supported behavior (Ostroff et al., in press). These signals clarify how employees should coordinate and direct their effort to achieve organizational outcomes. Inconsistency between features of the work context creates a weak situation in which employees spend time deciphering what they should and how they should do it, in effect lowering their productivity (Bowen & Ostroff, 2004). In addition to consistency across features of the work context, positive performance results from the congruence between a subunit's culture and the culture of a higher level organizational unit. Cultural consistency spanning hierarchical levels generate clear messages and superordinate goals that direct employees' behavior, yielding positive implications for unit performance (Bezrukova, Thatcher, Jehn, & Spell, 2012). Future research is needed to investigate these possibilities.

Limitations

Four limitations should be noted. First, all variables except for financial performance were obtained using a cross-sectional research design.

Consequently, one cannot draw causal inferences between organizational culture and its relationship with broad and narrow criteria. Second, organizational culture and its subjective outcomes were collected from the same set of respondents using a single method of data collection. I attempted to mitigate the effects of common method bias by incorporating a lagged, objective measure of financial performance. The significant relationship between the set of culture dimensions and financial performance suggest that the relationships between culture and its outcomes are not due entirely to common method bias. Furthermore, the associations between culture configurations and organizational criteria cannot be attributed to method bias.

To further assess the extent to which common method bias inflates this study's results, I compared this study's correlations with meta-analytic correlations (c.f., Hartnell et al., 2011). Comparisons reveal comparable effects between studies. In particular, clan culture exhibits large effects with commitment and overall employee attitudes in both studies. Similarly, adhocracy and market culture have moderate effects with attitudinal criteria in both studies. These similar correlations indicate that the magnitude of effects detected in this study is not seriously inflated due to common method variance. In addition to comparing the size of correlations, an examination of intercorrelations among culture dimensions reveals a stronger pattern of relationships among culture dimensions in this study than those reported in the meta-analysis. The difference may be due to sample characteristics. Organizational culture was rated by employees in small bank branches within a regional bank. As evidenced by the

strong level of agreement among employees, the bank branches emphasize all five culture dimensions, a a plausible possibility given the realities of doing business in the highly regulated banking industry. I thus contend that the narrow context in this study may be one factor driving higher correlations among culture dimensions. All told, common method bias may inflate the relationship between predictors and its criteria, but it rarely accounts completely for the significance of the results (Brannick, Chan, Conway, Lance, & Spector, 2010; Spector, 2006). Nonetheless, future research should replicate the current findings using longitudinal data to mitigate common method effects. Third, the study's sample came from 130 branches within a regional bank, limiting its generalizability. Future research should consider replicating the findings using firms across multiple industries to enhance the findings' external validity.

Fourth, the five culture dimensions measured in this study are highly applicable to banks and are resonant with the archetypes outlined in the CVF (Cameron & Quinn, 1999), but they are not comprehensive. Additional culture dimensions may exist in organizations that operate in different industries because organizational cultures are more similar in firms within the same industry than between industries (Chatman & Jehn, 1994). Evaluating culture and its effects across organizations in different industries may thus illuminate distinct configurational patterns from the configurations detected in this study. Future research should incorporate a broad set of values relevant to organizations within a diverse multi-industry sample to evaluate the results' generalizability.

Conclusion

Bandwidth is a theoretically and methodologically important consideration for a multifaceted phenomenon such as organizational culture. Narrow culture dimensions further culture theory by defining culture's content and predicting variance in narrow outcomes. Broad culture configurations advance culture theory by accounting for the pattern of culture dimensions that comprise an organization's gestalt culture and explaining unique variance in broad criteria. This study provided strong support for the theoretical tenants espoused by bandwidth theory (Cronbach & Gleser, 1965) and furthered an integrative approach to the bandwidth debate by identifying the relative benefits of narrow culture dimensions and broad culture dimensions. I hope this study's contributions to bandwidth theory and organizational culture theory stimulate future research to integrate broad and narrow construct bandwidths to formulate a more coherent picture of the effect of multifaceted constructs, enabling one to see the beauty of the forest through the trees.

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FIGURES FOR PAPER 1 APPEAR ON THE PAGES THAT FOLLOW

Figure 1

Model of the Culture Emergence Process

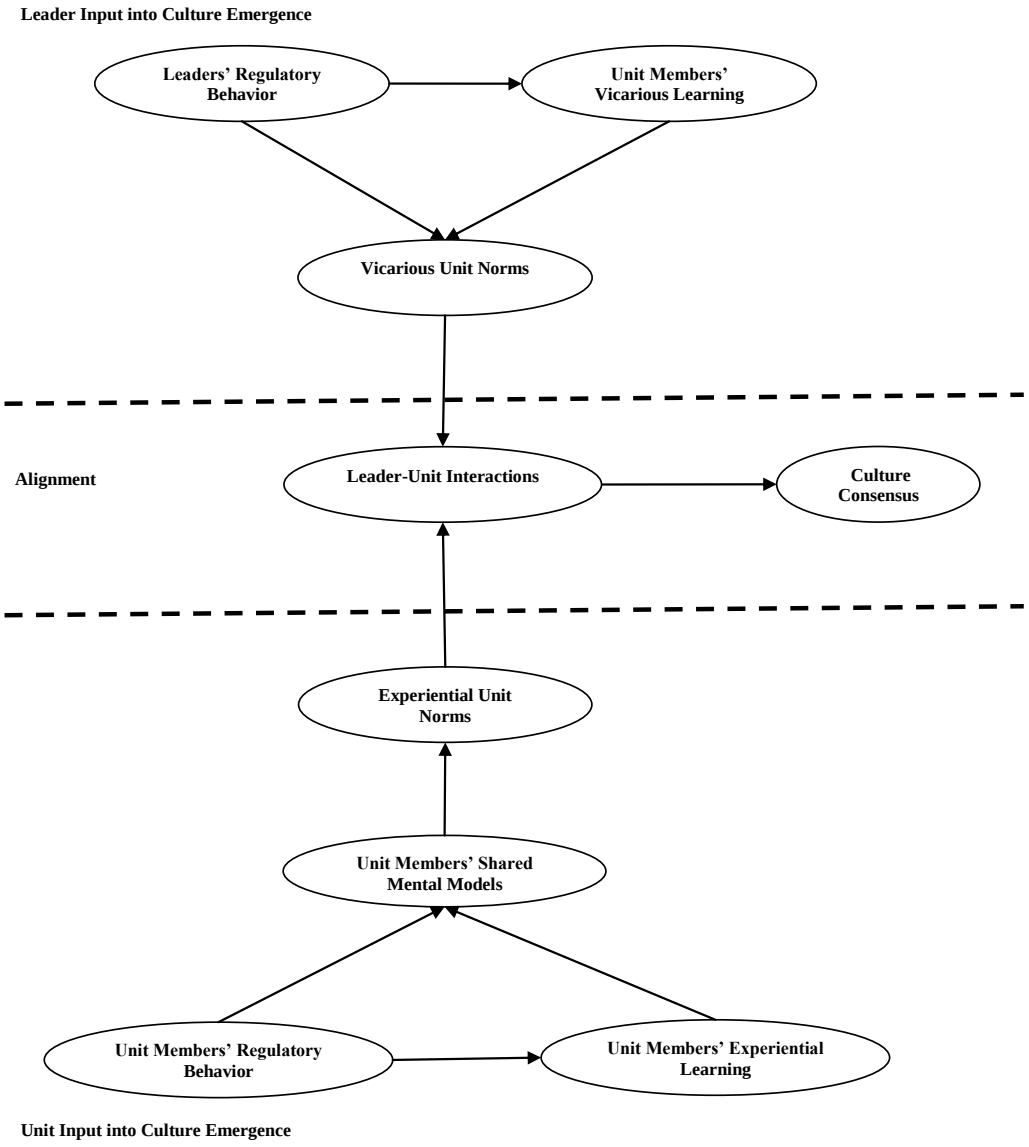


Figure 2

Leader-Unit Dual Regulatory Processes as a Source of Culture Consensus

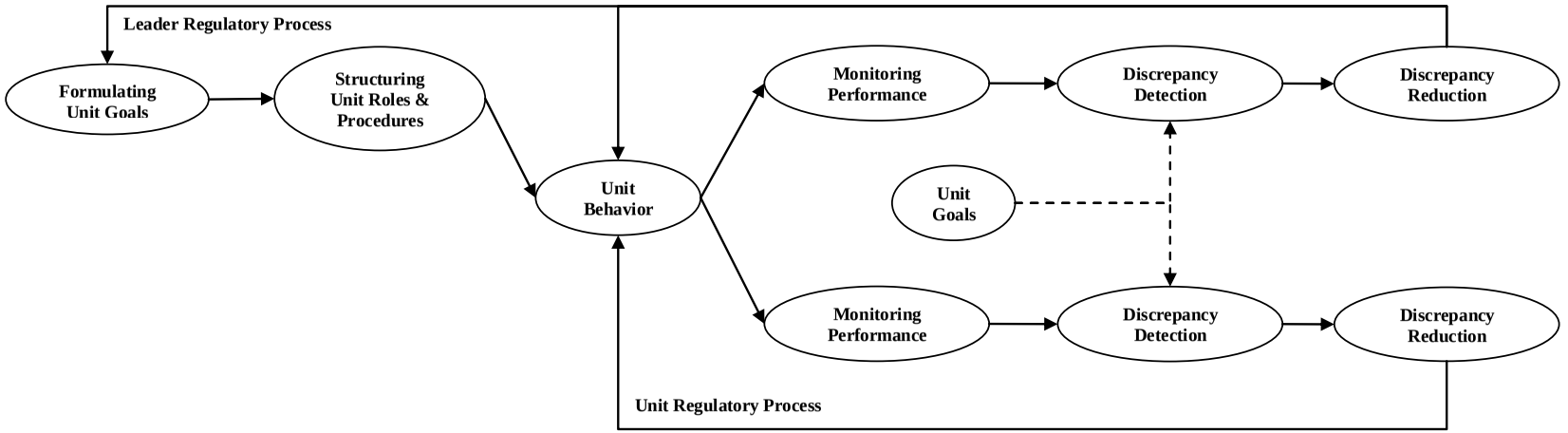


Figure 3

A Temporal Perspective of Leader-Unit Dual Regulatory Processes

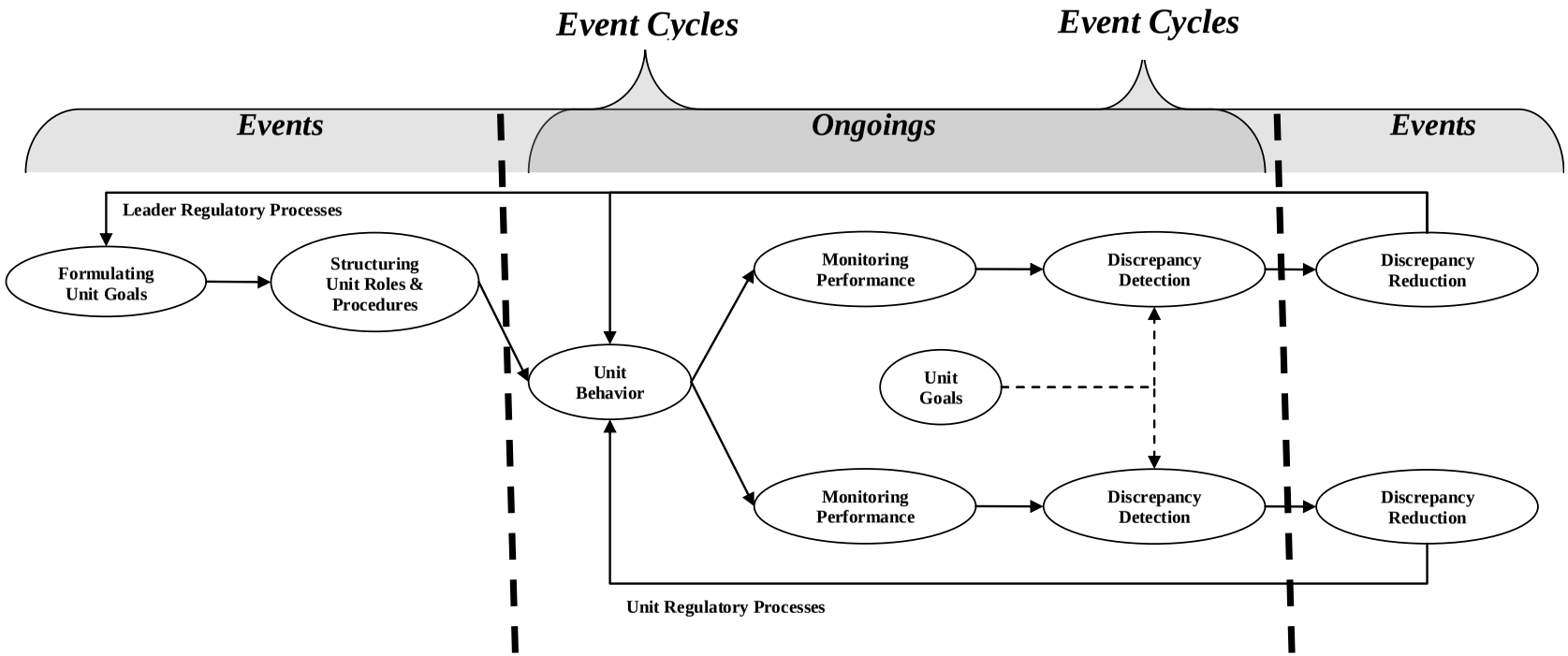
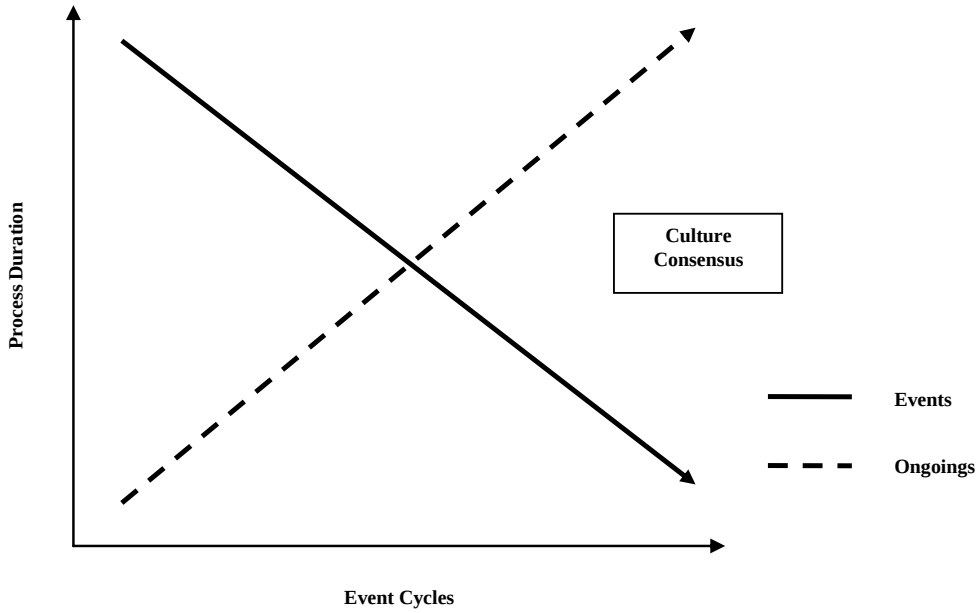


Figure 4

Event Cycles and Culture Consensus



TABLES AND FIGURES FOR PAPER 2 APPEAR ON THE PAGES THAT FOLLOW

Table 1

Means, Standard Deviations, and Correlations Among Indicators

Variable	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
(1) CEO tenure	4.16	1.95	1.00													
(2) CEO founder status[a]	1.82	.41	.00	1.00												
(3) Firm size[b]	2.19	.66	.04	-.13	1.00											
(4) TMT tenure	3.46	1.06	-.14	.02	.00	1.00										
(5) TMT size	3.33	.92	.09	-.03	.05	-.11	1.00									
(6) Task leadership 1	3.60	.56	.01	.20*	-.06	.11	-.13	1.00								
(7) Task leadership 2	3.55	.59	.00	.18	-.09	.04	-.06	.86**	1.00							
(8) Task culture 1	3.76	.59	.13	.09	.08	.05	-.12	.40**	.33**	1.00						
(9) Task culture 2	3.62	.74	.13	.09	.08	.07	-.16	.33**	.27**	.91**	1.00					
(10) TMT Engagement 1	3.73	.41	.23*	-.07	.04	-.09	.05	-.17	-.26**	.35**	.31**	1.00				
(11) TMT Engagement 2	3.71	.57	.10	-.10	.03	-.04	-.19	-.22*	-.31**	.48**	.47**	.67**	1.00			
(12) TMT Engagement 3	3.49	.68	.14	-.09	.09	-.01	-.04	-.34**	-.43**	.37**	.38**	.80**	.86**	1.00		
(13) Objective performance Q1	6.38	1.93	.04	.08	.17	-.07	.05	.02	.06	.29**	.22*	.19*	.28**	.21*	1.00	
(14) Objective performance Q2	7.02	1.87	.06	-.02	.15	-.07	.06	-.01	.05	.22*	.14	.20*	.26**	.18	.84**	1.00
(15) Objective performance Q3	6.87	1.99	.06	.05	.15	-.06	.03	.03	.05	.26**	.18	.18	.26**	.20*	.87**	.92**

Notes: $N = 106$.

[a] CEO founder status: 1 = founder; 2 = non-founder

[b] Firm Size (number of employees): 1 = 1-200; 2 = 201-1,000; 3 = 1,001-5,000; 4 = 5,000+

* $p < .05$; ** $p < .01$ (two-tailed)

Table 2

Fit Indices for Measurement Models

Models	χ^2	*df*	NNFI	CFI	IFI	RMSEA	$\Delta\ \chi^2$	Δ *df*
Measurement Models								
1. Factor baseline model	49.55	29	0.97	0.98	0.98	0.08		
2. Null model	141.53	35	0.87	0.9	0.9	0.17	91.98**	
Difference from Model 1								6
3. Single factor model	773.3	35	0.08	0.28	0.29	0.45		
Difference from Model 1							723.75**	6
4. Discriminant model: Task leadership and task culture	280.02	32	0.66	0.76	0.76	0.27		
Difference from Model 1							230.47**	3
5. Discriminant model: Task culture and TMT engagement	223.38	32	0.74	0.81	0.82	0.24		
Difference from Model 1							173.83**	3
6. Discriminant model: Task leadership and TMT engagement	270.36	32	0.67	0.77	0.77	0.27		
Difference from Model 1							220.81**	3

Notes. N = 106 for all analyses. NNFI = non-normed fit index; CFI = comparative fit index; IFI = incremental fit index; RMSEA = root mean standard error of approximation.

*p <.05.

**p <.01.

Table 3

Fit Indices for Structural Models

Models	χ^2	*df*	NNFI	CFI	IFI	RMSEA	$\Delta\ \chi^2$	$\Delta\ df$
Structural Models								
1. Baseline Structural Model	119.37	88	0.96	0.97	0.97	0.06		
2. Fully Mediated Model	168.36	89	0.91	0.92	0.92	0.09		
Difference from Model 1							48.99**	1
3. Partially Mediated Model with added path from task leadership to firm performance	116.18	87	0.97	0.97	0.97	0.06		
Difference from Model 1							3.19	1

Notes. N = 106 for all analyses. NNFI = non-normed fit index; CFI = comparative fit index; IFI = incremental fit index; RMSEA = root mean standard error of approximation.

*p <.05.

** p <.01.

Figure 1

Hypothesized Model

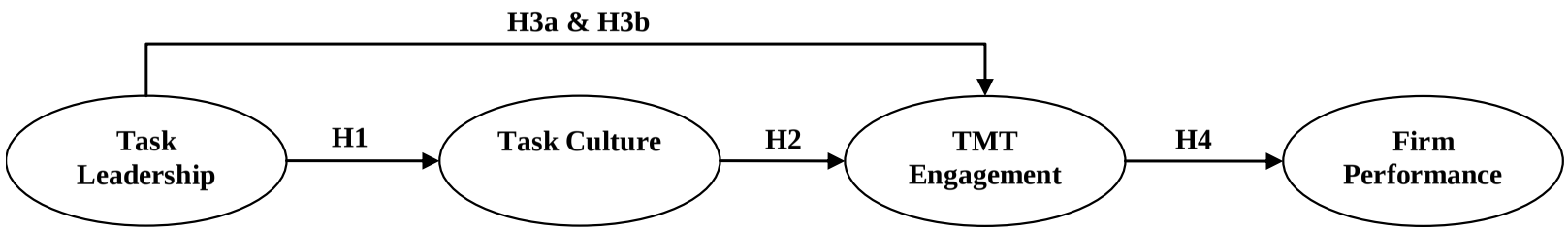
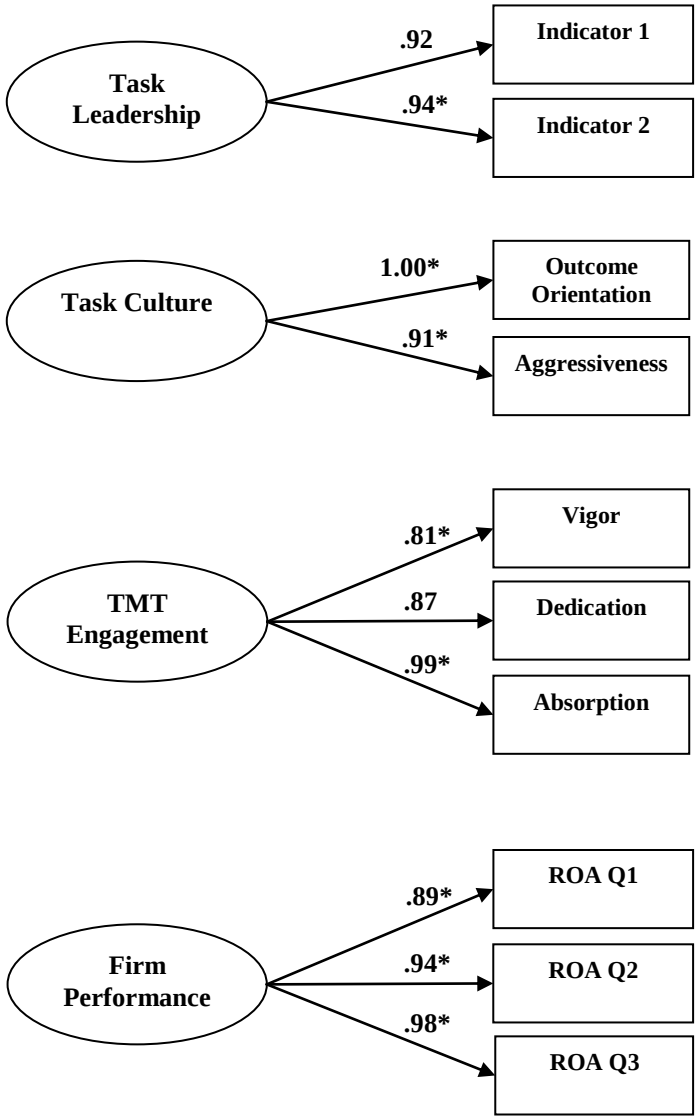


Figure 2

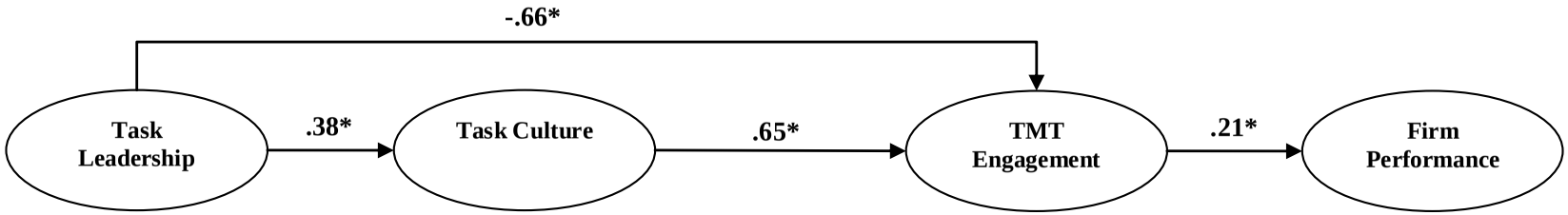
Standardized Factor Loadings on Latent Constructs



Notes. $n = 106$. * $p < .05$.

Figure 3

Structural Equation Model Results with Latent Constructs



Notes. n = 106. Standardized parameter estimates are presented. Insignificant controls were omitted from the figure.
* $p < .05$.

TABLES AND FIGURES FOR PAPER 3 APPEAR ON THE PAGES THAT FOLLOW

Table 1

Means, Standard Deviations, and Correlations Among Variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
Controls												
1) Branch size [a]	6.86	1.93	1									
Culture Dimensions												
2) Clan culture [b]	3.96	0.44	-0.03	1								
3) Adhocracy culture [b]	3.75	0.37	-0.06	0.79**	1							
4) Market culture [b]	4.02	0.38	-0.03	0.82**	0.65**	1						
5) Hierarchy culture [b]	3.94	0.39	0.04	0.85**	0.74**	0.86**	1					
6) Ethical culture [b]	4.06	0.4	-0.08	0.85**	0.71**	0.85**	0.84**	1				
Culture Configurations												
7) Shape 1: Moderate [b]	0.28	0.45	-0.02	0.08	0.04	0.10	0.16	0.08	1			
8) Shape 2: Comprehensive [b]	0.36	0.48	-0.03	0.69**	0.64**	0.66**	0.64**	0.68**	-0.47**	1		
9) Shape 3: Moderate-Low [b]	0.23	0.42	0.05	-0.36**	-0.34**	-0.36**	-0.40**	-0.37**	-0.35**	-0.41**	1	
10) Shape 4: Deprived [b]	0.12	0.33	0.01	-0.66**	-0.55**	-0.63**	-0.66**	-0.63**	-0.24**	-0.28**	-0.21*	1

Notes: [a] N = 121; [b] N = 130; [c] N = 129; [d] N = 122.

* p < .05; ** p < .01 (two-tailed).

Table 1 (cont.)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
Narrow Criteria												
11) Affective commitment [b]	3.78	0.5	0.01	0.59**	0.48**	0.42**	0.50**	0.53**	-0.01	0.51**	-0.38**	-0.25**
12) Supervisor satisfaction [b]	4.07	0.63	0.13	0.62**	0.50**	0.46**	0.53**	0.54**	0.00	0.50**	-0.31**	-0.34**
13) Engagement for service [b]	4.12	0.46	-0.05	0.59**	0.42**	0.65**	0.56**	0.60**	-0.02	0.53**	-0.31**	-0.35**
14) Climate for support [c]	3.75	0.57	0.00	0.79**	0.62**	0.58**	0.71**	0.70**	0.01	0.60**	-0.32**	-0.47**
15) Climate for innovation [c]	3.55	0.44	0.03	0.67**	0.51**	0.55**	0.59**	0.58**	0.01	0.54**	-0.36**	-0.35**
16) Climate for goal achievement [c]	3.85	0.45	0.02	0.54**	0.41**	0.69**	0.53**	0.61**	-0.03	0.57**	-0.42**	-0.24**
Broad Criteria												
17) Team climate [c]	3.72	0.42	0.02	0.79**	0.61**	0.70**	0.72**	0.74**	0.00	0.67**	-0.43**	-0.43**
18) Team engagement [b]	3.61	0.33	0.11	0.39**	0.36**	0.34**	0.34**	0.36**	-0.08	0.46**	-0.30**	-0.17*
19) Positive employee attitudes [b]	3.85	0.44	0.02	0.58**	0.47**	0.45**	0.51**	0.53**	-0.03	0.55**	-0.40**	-0.25**
20) Financial performance [d]	5.1	0.25	.23**	-0.20*	-0.13	-0.20*	-0.15	-0.21*	-0.04	-0.14	0.09	0.12

Notes: [a] N = 121; [b] N = 130; [c] N = 129; [d] N = 122.

* p < .05; ** p < .01 (two-tailed).

Table 1 (cont.)

Variable	11	12	13	14	15	16	17	18	19	20
Narrow Criteria										
11) Affective commitment [b]	1									
12) Supervisor satisfaction [b]	0.59***	1								
13) Engagement for service [b]	0.53***	0.30**	1							
14) Climate for support [c]	0.72***	0.79**	0.51**	1						
15) Climate for innovation [c]	0.52***	0.60**	0.43**	0.75**	1					
16) Climate for goal achievement [c]	0.52***	0.42**	0.68**	0.50**	0.52**	1				
Broad Criteria										
17) Team climate [c]	0.70***	0.72**	0.63**	0.90**	0.88**	0.77**	1			
18) Team engagement [b]	0.65***	0.49**	0.43**	0.56**	0.48**	0.52**	0.61**	1		
19) Positive employee attitudes [b]	0.96***	0.62**	0.55**	0.74**	0.54**	0.55**	0.73**	0.75**	1	
20) Financial Performance [d]	-0.12	-0.10	-0.28**	-0.20*	-0.09	-0.14	-0.18*	0.03	-0.13	1

Notes: [a] $N = 121$; [b] $N = 130$; [c] $N = 129$; [d] $N = 122$.

* $p < .05$; ** $p < .01$ (two-tailed).

Table 2

Aggregation Statistics for Employee Rated Variables

	Items	ANOVA (one-way)	r_{wg}	ICC (1)	ICC (2)
Culture Dimensions					
Clan Culture	5	F (121, 431) = 2.26, p<.01	0.90	0.27	0.56
Adhocracy Culture	6	F (121, 428) = 1.82, p<.01	0.91	0.18	0.45
Market Culture	7	F (121, 431) = 1.92, p<.01	0.94	0.20	0.48
Hierarchy Culture	7	F (121, 431) = 2.09, p<.01	0.94	0.24	0.52
Ethical Culture	5	F (121, 432) = 1.87, p<.01	0.92	0.19	0.46
Narrow Criteria					
Affective Commitment	4	F (121, 430) = 1.60, p<.01	0.86	0.13	0.37
Supervisor Satisfaction	3	F (121, 429) = 2.51, p<.01	0.78	0.33	0.60
Engagement for Service	6	F (121, 433) = 2.02, p<.01	0.93	0.22	0.50
Climate for Support	4	F (120, 429) = 2.91, p<.01	0.87	0.42	0.66
Climate for Innovation	4	F (121, 430) = 1.77, p<.01	0.89	0.17	0.43
Climate for Goal Achievement	4	F (120, 430) = 1.95, p<.01	0.89	0.21	0.49
Broad Criteria					
Team Climate	12	F (120, 427) = 2.56, p<.01	0.96	0.34	0.61
Team Engagement	14	F (121, 428) = 1.29, p<.05	0.96	0.06	0.23
Positive Employee Attitudes	7	F (121, 430) = 1.56, p<.01	0.93	0.12	0.36

Table 3

Confirmatory Factor Analyses on Broad Criteria

Models	X^2	df	NNFI	CFI	IFI	SRMR	ΔX^2	Δ df
Team Climate One-Factor Model	667.55	54	0.46	0.56	0.57	0.15		
Team Climate 2nd Order Factor	129.42	51	0.93	0.94	0.95	0.1	538.13**	3
Team Engagement One-Factor Model	317.83	65	0.71	0.76	0.76	0.11		
Team Engagement 2nd Order Factor	165.82	62	0.88	0.9	0.9	0.07	152.01**	3
Positive Employee Attitudes One-Factor Model	426.6	14	0.41	0.61	0.61	0.16		
Positive Employee Attitudes 2nd Order Factor	40.88	12	0.95	0.97	0.97	0.03	385.72**	2

Notes. N = 130.

NNFI = non-normed fit index; CFI = comparative fit index; IFI = incremental fit index; SRMR = standardized root mean square residual.

*p <.05; **p <.01.

Table 4

Hierarchical Regression Analysis of Clan Culture on Narrow Criteria

	Clan Culture		
Variable	Climate for Support[a]	Affective Commitment[b]	Supervisor Satisfaction[b]
Step 1			
Branch size	0.00	0.01	0.13
R^2	0.00	0.00	0.02
Step 2			
Adhocracy culture	0.12	0.17	0.18
Market culture	-0.40**	-0.17	-0.12
Hierarchy culture	0.51**	0.08	0.17
Ethical culture	0.54**	0.50**	0.38*
R^2	0.57	0.31	0.35
ΔR^2	0.57**	0.31**	0.33**
Step 3			
Clan culture	0.74**	0.55**	0.62**
R^2	0.66	0.36	0.42
ΔR^2	0.09**	0.05**	0.07**

Note. Standardized beta weights are reported.

[a] N =120; [b] N =121.

*p<.05; **p<.01.

Table 5

Hierarchical Regression Analysis of Adhocracy and Market Cultures on Narrow Criteria

	Adhocracy Culture		Market Culture	
Variable	Climate for Innovation[a]	Variable	Climate for Goal Achievement[a]	Engagement for Service[b]
Step 1		*Step 1*		
Branch size	0.03	Branch size	0.02	-0.05
R^2	0.00	R^2	0.00	0.00
Step 2		*Step 2*		
Clan culture	0.67**	Clan culture	0.05	0.36*
Market culture	-0.05	Adhocracy culture	-0.07	-0.17
Hierarchy culture	0.03	Hierarchy culture	0.03	0.10
Ethical culture	0.00	Ethical culture	0.59**	0.34*
R^2	0.44	R^2	0.36	0.41
ΔR^2	0.44**	ΔR^2	0.36**	0.41**
Step 3		*Step 3*		
Adhocracy culture	-0.06	Market culture	0.89**	0.45**
R^2	0.44	R^2	0.50	0.45
ΔR^2	0.00	ΔR^2	0.14**	0.04**

Note. Standardized beta weights are reported.

[a] N =120; [b] N =121.

*p<.05; **p<.01.

Table 6

Hierarchical Regression Analyses of Culture Dimensions and Culture Configurations on Narrow Criteria

Variable	Climate for Support[a]	Climate for Innovation[a]	Climate for Goal Achievement[a]	Engagement for Service[b]	Affective Commitment[b]	Supervisor Satisfaction[b]
Step 1						
Branch size	0.00	0.03	0.02	-0.05	0.01	0.13
R^2	0.00	0.00	0.00	0.00	0.00	0.02
Step 2						
Clan culture	0.74**	0.71**	-0.05	0.25	0.55**	0.62***
Adhocracy culture	-0.06	-0.06	-0.03	-0.14	0.02	0.02
Market culture	-0.47**	-0.05	0.89**	0.45**	-0.30	-0.25
Hierarchy culture	0.30*	0.05	-0.41*	-0.10	-0.04	0.04
Ethical culture	0.27*	0.01	0.24	0.20	0.33	0.20
R^2	0.66	0.44	0.50	0.45	0.36	0.42
ΔR^2	0.66**	0.44**	0.50**	0.45**	0.36**	0.40***
Step 3[c]						
Shape 2: Comprehensive	0.09	0.13	0.16	0.12	0.16	0.14
Shape 3: Moderate-Low	0.02	-0.09	-0.12	0.02	-0.13	-0.07
Shape 4: Deprived	0.09	0.06	0.18	0.17	0.04	0.00
R^2	0.67	0.47	0.58	0.48	0.40	0.43
ΔR^2	0.01	0.03	0.08**	0.03	0.04	0.03

Note. Standardized beta weights are reported.

[a] N =120; [b] N =121.

[c] Shape 1: Moderate is omitted dummy variable.

*p<.05; **p<.01.

Table 7

Hierarchical Regression Analyses of Culture Dimensions and Culture Configurations on Broad Criteria

Variable	Team Climate[a]	Team Engagement[b]	Positive Employee Attitudes[b]	Financial Performance[c]
Step 1				
Branch size	0.02	0.11	0.02	0.23*
R^2	0.00	0.01	0.00	0.05*
Step 2				
Clan culture	0.58**	0.22	0.46*	-0.24
Adhocracy culture	-0.06	0.15	0.01	0.15
Market culture	0.08	0.13	-0.16	0.06
Hierarchy culture	0.00	-0.21	-0.01	-0.04
Ethical culture	0.21	0.14	0.27	-0.2
R^2	0.63	0.18	0.34	0.15
ΔR^2	0.63**	0.17**	0.34**	0.10*
Step 3[d]				
Shape 2: Comprehensive	0.14	0.37**	0.27*	0.13
Shape 3: Moderate-Low	-0.07	-0.27	-0.20	-0.02
Shape 4: Deprived	0.11	-0.28	-0.06	-0.34
R^2	0.67	0.26	0.40	0.18
ΔR^2	0.04**	0.09**	0.06**	0.03

Note. Standardized beta weights are reported.

[a] N =120; [b] N =121; [c] N =113

[d] Shape 1: Moderate is omitted dummy variable.

*p<.05; **p<.01.

Table 8

Post Hoc Hierarchical Regression Analyses of Culture Configurations Characteristics on Broad Criteria

Variable	Team Climate[a]	Team Engagement[b]	Positive Employee Attitudes[b]	Financial Performance[c]
Step 1				
Branch size	0.02	0.11	0.02	0.23*
R^2	0.00	0.01	0.00	0.05*
Step 2				
Elevation	0.77**	0.39**	0.55**	-0.27**
R^2	0.59	0.16	0.30	0.13
ΔR^2	0.59**	0.15**	0.30**	0.08**
Step 3				
Variability	0.01	-0.13	0.03	-0.19*
R^2	0.59	0.18	0.30	0.16
ΔR^2	0.00	0.02	0.00	0.03*
Step 4[d]				
Shape 2: Comprehensive	0.14	0.36**	0.30*	0.11
Shape 3: Moderate-Low	-0.07	-0.25*	-0.20	-0.02
Shape 4: Deprived	0.09	-0.23	-0.10	-0.28
R^2	0.63	0.26	0.37	0.19
ΔR^2	0.04*	0.08**	0.07**	0.03

Note. Standardized beta weights are reported.

[a] N =120; [b] N =121; [c] N =113

[d] Shape 1: Moderate is omitted dummy variable.

*p<.05; **p<.01.

Figure 1

Culture and Criteria by Bandwidth