REFLECTIONS ON THE 2014 DECADE AWARD:

IS THERE STRENGTH IN THE CONSTRUCT OF HR SYSTEM STRENGTH?

Cheri Ostroff

University of South Australia

Cheri.Ostroff@unisa.edu.au

and

David E. Bowen

Arizona State University

David.E.Bowen@thunderbird.asu.edu

We are grateful to Marie Wilson, Ben Schneider, Belle Rose Ragins, and Mo Wang for their insightful comments on this reflection paper.

Abstract

Since the 2004 publication of "Understanding firm-performance linkages: The role of the strength of the HRM system," the concept of HRM strength has been widely accepted in the field. We reflect on how the construct of HRM system strength has been used in subsequent theory and research with particular attention devoted to identifying consistencies and inconsistencies from the original intent and implications of the construct for related areas and topics such as strategic HRM, HRM architecture, social-psychological contracts, and organizational climate strength. Our review indicates that subsequent work has considerably added to the original; however challenges remain in capitalizing on this construct in both theory and research. We conclude by offering promising directions for further developing the construct of HRM system strength.

Keywords: Human Resources, Multi-Level Theory, Climate (Organizational), Leadership, Attribution Theory

Publishing our paper "Understanding firm-performance linkages: The role of the strength of the HRM system" was a challenge. Despite our conviction that the construct of HRM (human resource management) system strength was an important one, after an arduous review process, we were wary about how the paper would be received in the field. Imagine our surprise when the paper received the HR Division Scholarly Achievement Award in 2005. We were truly stunned to receive the AMR Decade Award in 2014.

We believe the sustained influence of the paper resides in its core distinction between HR practices i.e., the "what" or content of the practices and HR process, i.e., the "how" or the process mechanisms through which the HR system is delivered to send signals to employees. HR practices are purported to send communications and signals that employees draw attributions about to develop an understanding of what is valued, expected and rewarded – the intended message. HR process focuses on the multitude of mechanisms through which this message can be delivered to make it unambiguous – the medium. Thus, a strong HRM system contains process mechanisms that make the set of practices coherent, salient and distinctive, and visible and understandable, the result of which builds consensus among employees about the practices and allows for shared perceptions of climate to emerge. This distinction between content and process, and the way they operate in concert, has allowed researchers to delve into many facets of how HR systems have their intended consequences (or not), regardless of the specific HR practices themselves.

The construct of HRM strength was introduced to spark thinking and research about the meta-features of an HR system that would allow employees to develop common interpretations about the signals sent by the HR practices, thereby creating agreement across employees about the climate, i.e., a strong climate. In what follows, we first provide a brief overview of HRM

strength. We then reflect on the ways in which the field has made sense of our framework and the concept of HRM strength. In particular, we focus on how the HRM strength construct has been interpreted in subsequent research, highlighting both elements and interpretations that are consistent with the original intent and those that diverge from our intended meaning and use of the construct. In doing so, avenues for future research are provided.

Recap of HRM Strength

Our interest in pursuing a theoretical paper on HRM strength, and delineating the features of an HRM system that would allow similar interpretations of what is valued, rewarded, and expected arose, from observing the thrust of research in the field at the time and from our own observations about life in organizations. Research on HR systems and their relationship to firm performance had become a hot topic in the 1990's following the publication of a number of seminal papers (e.g., Arthur, 1994; Barney, 1991; Becker & Gerhart, 1996; Huselid, 1995; Ichniowski, Shaw & Prennushi, 1997). Rhetoric was also beginning to be devoted to understanding the "black box" between HR systems and firm performance in the form of mediators such as the influence of HR practices on developing human capital and motivating employees to respond in ways desirable for organizational functioning (e.g., Wright & McMahan, 1992; Wright, McMahan & Williams, 1994). The focus on the black box continues for example highlighting the role of work interdependence and relationships among employees (Gittel, Seidner, & Wimbush, 2010), organizational climate (e.g., Aryee, Walumbwa, Seidu, & Otaye, 2012; Gelade & Ivery, 2003), psychological contracts and employee attitudes (Guest, 2007; Guest & Conway, 2002).

Our framework maintained that this work left (and still leaves) a great deal that is unexplained as to *how* HRM systems could forge substantial linkages to such proposed

mediators. The basic premise is that none of those relationships between HR and performance will manifest unless the practices are salient across employees so they collectively come to know what the practices are and develop a shared understanding of them of their foci. The foundation of HRM strength stems from Mischel's (1973) work on strong situations in which people perceive the situation in similar ways thereby generating uniform expectancies about the appropriate responses and behaviors. From this basic premise and incorporating attribution and communication theories, nine meta-features of the HR system process were developed (grouped into distinctiveness, visibility and consensus). We proposed that these features create a strong HR system and need to be present in order for the HR practices to communicate their intended effects and ultimately influence firm performance. The core premises of "strength of the HRM system" included:

- HR practices send signals to employees about the responses and behaviors that are expected, rewarded and valued. These signals are interpreted by employees and form the basis of psychological climate perceptions, but do not necessarily create a shared organizational climate.
- Signals sent by the HR practices will be interpreted idiosyncratically unless other HR process mechanisms reinforce and thus help to create a strong HRM system.
- The process mechanisms of a strong HRM system are *nine features*, grouped into three attributional meta-features: 1) distinctiveness (visibility, and understandability of practices, relevance of the practices to strategic and individual goal achievement, and legitimacy of authority of the HR function), 2) consistency (instrumentality by establishing cause-effect relationships, validity of practices, and consistency in messages

across employees); and 3) consensus (agreement among message senders and fairness of practices) which work in concert to deliver the larger HR message.

- HRM system strength is a higher-level construct that is a contextual property of the unit or organization and enables HRM to send unambiguous messages about the broader culture, climate, priorities, and values.
- Without a strong HRM system process, shared perceptions of what the practices convey and a strong climate will not emerge; emergent higher-level collective effects on firm performance will not be fully realized and individual level idiosyncratic perceptions and responses will predominate.
- The HRM system strength concept helps weave together the systems approach and strategic perspective on the HRM-firm performance link by enabling the creation of a strong organizational climate *for a particular strategic focus*, e.g. service or cost leadership.

Examining the more than 1500 google scholar citations that have appeared since the initial publication, we contend that the concept of HRM system strength still remains largely underexplored. The preponderance of papers use the concept of HRM strength as part of building theoretical rationales or as a basis for interpreting results without directly testing the concept, for example in building rationales for exploring attributions about why the practices were put into place (Nishii, Lepak & Schneider, 2008), explaining stronger relationships between service climate and service outcomes (Hong, Liao, Hu & Jiang, 2013) or justifying why shared perceptions of the content of the HR systems will influence climate and outcomes (Veld, Paauwe & Boselie, 2010). Empirical studies attempting to directly assess the concept of HR system strength have not tended to examine HRM strength as a higher-level property of the HR system

as originally intended. Rather, individuals' own perceptions of HRM system strength have most often been examined in relation to individual attitudes and outcomes. This is discussed in more detail later. That said, across the numerous papers, theory and research on HRM system strength indicates the construct is viable and important in the field.

In the following sections, we first review the manner in which HRM strength has been conceptualized and operationalized in subsequent research. Next, we share some thoughts on the implications and future research directions of the HRM strength construct for other constructs and foci in the HRM domain – strategic HRM; HR architecture; social-psychological contracts; and climate strength. Finally, we take a multi-stakeholder view of HRM strength from the vantage point of leaders/managers, employees and customers.

OPERATIONALIZING HRM SYSTEM STRENGTH

Since its introduction, researchers have conceptualized and operationalized HRM system strength in a variety of ways, sometimes in ways not originally intended. A number of researchers have focused on individuals' own perceptions of HRM system strength (e.g., Bednall, Sanders, & Runhaar, 2014; Coelho, e Cunha, Gomes, & Correia, 2012; Delmotte, De Winne, & Sels, 2012; Frenkel, Li & Restubog, 2012; Frenkel &Yu, 2011; Riberio, Coelho & Gomes, 2011). That is, HRM strength has been treated as an individual difference variable, rather than as a higher-level contextual variable, by focusing on individuals' own views of the degree to of distinctiveness, visibility and consensus inherent in the HR practices. We contend this is a different, albeit meaningful, construct – but a construct that should be distinguished from HRM system strength per se. What Delmotte et al. (2012) termed perceptions of HRM system strength is an appropriate label for these idiosyncratic perceptions as they reflects idiosyncratic processing of the social context that can in turn influence individual responses. This notion is

more reflective of social exchange (Thibaut & Kelley, 1959) and social information processing (Salancik & Pfeffer, 1978) theories that focus on how individuals' interpretation of their context influences their responses. These studies highlight that within-unit or within-organization variability in interpretations of the HR system (Wright & Nishii, 2013) can be linked to individual outcomes. Importantly, this within unit variability also suggests lower HRM system strength because consensus across employees should be high with a strong HRM system.

HRM system strength has also been operationalized as a count of the number of practices perceived to have been implemented with the assumption that more practices send more signals (e.g., White & Bryson, 2013). The number of practices may be indirectly reflective of HRM strength but does not get to the heart of whether the practices are distinctive, consistent, and show consensus among decision makers and fairness. Other operationalizations have included the sum of individual's ratings across a set of practices with the assumption that a higher score in the content of practices indicates a stronger system (e.g., Stumpf, Doh & Tymon, 2010), and as the aggregated score in content of practices with the assumption that, given some degree of similarity that justifies aggregation, shared perceptions in the content of practices reflects a stronger system (e.g., Kehoe & Wright, 2013; Veld, et al., 2010). Our view is that these conceptualizations are indirect as they do not focus on the meta-features of distinctiveness, consistency, and consensus of a strong HRM system. Rather, they indirectly focus on the *outcome* of a strong system, namely that the result of building distinctiveness, consistency and consensus into the HRM process is shared meanings of the situation or practices.

An outcome of incorporating the features of a strong HRM system should be both shared views about the practices and shared perceptions of the meaning of those practices (climate) across employees. This notion has also been investigated (e.g., Aksoy & Bayazit, 2014; Monks,

Kelly, Conway, Flood, Truss & Hannon, 2013) but again, we see this as a proxy measure rather than a direct conceptualization of HRM strength per se. Similarly, a growing number of researchers have focused on the concept of HRM system strength as the degree of similarity or consistency in perceptions of what practices are in place between leaders and employees (e.g., Aryee, Walumbwa, Seidu, & Otaye, 2012; Chen, Lin, Lu, & Tsao, 2007; Den Hartog, Boon, Verburg & Croon, 2013; Liao, Toya, Lepak, & Hong, 2009). This line of research is interesting as we asserted in "strength of the HRM system" that comparisons between delivery agents or leaders and employees can provide some indication of how visible practices are to employees. Inconsistencies between leaders and employees views suggest that the HRM system is weakly delivered. The gap between leaders and employees in their views of what practices are in place is revealing and indicates that the HRM system is weakly delivered, however it does point to what parts of the HRM process are weak.

As we noted in "strength of the HRM system," the conceptualization and measurement of HRM system strength requires the use of multiple sources of data rather than exclusively relying on aggregated employee perceptions about each of the features. This approach is illustrated in Sanders, Dorenbosch and de Reuver (2008) who used multiple sources to tap different features of HRM strength. For example, distinctiveness was assessed from employee perceptions, consistency was measured as within-respondent agreement across the HR practices, and consensus among decision makers was assessed through differences been line and HR measures views. We encourage more research of this nature at but at higher levels of analysis.

Higher-Level Operationalization of HRM System Strength

We agree with Sanders and her colleagues (Sanders, Shipton & Gomes, 2014) that, to date, a comprehensive and sophisticated measure HRM system strength has not been developed.

This is unfortunate given the amount of research being conducted on the topic. In "HRM system strength," we proposed nine meta-features across the three attributional constructs of distinctiveness, consistency, and consensus. Subsequent measures have almost always been based on employee perceptions of the features at the individual level of analysis. The factor structure has been inconsistent, with some finding more than nine features (e.g., Delmotte et al., 2012) and others finding only one factor (e.g., Coelho et al., 2012). Given different conceptualization, items, countries, and industries, it is unknown whether the inconsistencies across studies are due to problems with the theoretical framework or due to measurement and methodology issues. More importantly, "this construct is a situational context variable, and as we have defined it, represents a higher-level construct (p. 216)."

A comprehensive measure of HR system strength, as originally intended, still needs to be developed. While aggregated employee perceptions will certainly play a role for some features, other features will be measured through other means. For example, as noted above, visibility can be assessed by comparing providing a list of the practices deemed by the organization to be in place and the extent to which employees indicate they are in place. Understandability could be assessed be asking employees views of what the practices means and comparing their views to written policies or the HR function's intent. Validity could be expanded beyond employees' views of face validity to include the extent to which practices have been validated in a traditional sense. Moreover, these types of assessments could be compared to employees' perceptions of them as further evidence of their validity. In sum, we issue a call to researchers to rethink the measurement approach about HR system strength and develop measures focused at the higher-level contextual unit of analysis.

We also note that with few exceptions, such as Den Hartog, et al. (2013) who relied on signaling theory, researchers' reliance on communication and attribution theories beyond those in "strength of the HRM system" is rare. For example, given that the premise of HRM strength rests on the communication process of HR, uncertainty reduction theory (Berger & Calabrese, 1975) may be relevant as it focuses on how uncertainty is reduced by the amount and frequency of communications from key agents and through features of the context. We urge researchers to expand upon the foundational basis of HRM strength through greater reliance on different communication and attribution theories as explanatory mechanisms.

Support for the Proposed HRM Strength Construct

Despite the differing conceptualizations and operationalizations of HRM system strength, the body of research strongly suggests that HRM system strength is a meaningful construct that plays a role in shaping individuals responses and unit or organizational outcomes. As noted earlier, the preponderance of studies have been conducted at the individual level of analysis and have consistently shown that employees' perceptions of HRM system strength and visibility as defined by employee-leader discrepancies have important implications for employee attitudes and responses (e.g., Bednall et al., 2014; Den Hartog et al., 2013; Sanders et al, 2008; Li, Frenkel & Sanders, 2011; Riberio et al., 2011). Features of HRM system strength also have implications for the perceived effectiveness of the HR function in the roles of administrative expert, employee champion, change agent, and strategic partner with different features more or less important for different roles (De Winne, Delmotte, Gilbert & Sels, 2013). Indeed, the mere fact that there is substantial variability across employees in the same units or organizations speaks to the need for substantially more investigations of HRM strength at higher levels of analysis.

At higher levels of analysis, aggregated perceptions of individuals' views of the facets of distinctiveness, consistency, and consensus of HRM strength influenced employees' responses (motivation, commitment, engagement, OCB) as well as moderate the relationship between HR practices and employee responses (Katou, Budhwar, & Patel 2014), supporting our original contentions. Similarly, HRM system strength was related to both climate content and climate strength with distinctiveness shown to be most important (Aksoy & Bayazit, 2014), consistent with the notion that a distinctive system that calls attention to practices without the supporting consistency and consensus would be detrimental. In a case study of three hospitals, the role of leaders at all levels was found to be most important for developing a strong system (Stanton, Young, Bartram & Leggat, 2010).

The Complexity of It ALL: What, How, and Why Attributions

Building on the concept of HR system strength and the role of attributions in translating practices into outcomes, Nishii and her colleagues (2008) focused on individual attributions about why the practices are in place such as for employee well-being or to exploit employees. This is an important additional conceptualization that adds substantially to this construct space about the signals that HR practices send to employees and the attributions derived from them. Given this, we propose that the HRM construct space as interpreted by employees comprises the content or "what" of the practices, i.e., HR system content, the process or "how" they are delivered, i.e., HRM system strength, and the intent or "why" practices exist, i.e., HR attributions. Exploring the interplay between these three conceptualizations opens up another important avenue for future research – underscoring the darkness of the "black box" between HRM systems and firm performance.

IMPLICATIONS OF HR SYSTEM STRENGTH FOR RELATED CONSTRUCTS

The concept of HRM strength has become a fundamental component in theories of strategic HRM, effectively managing human capital and HRM architecture, employee-organizational exchanges in the form of psychological and normative contracts, and climate strength. These topics are broadly concerned with the processes that must take place in order for HRM practices to impact organizational performance. The increasing depth and breadth on HR systems and strategy over the past 10 years has advanced beyond the original call to focus on importance of linkages among the HR function, philosophy, practices, and processes (Becker & Gerhart, 1996) and points to additional ways to conceptualize and assess features of HRM system strength as a continuum, precursors, and configurations.

Strategic HRM

HR practices that are aligned with strategy and reinforce the culture should lead to increased firm effectiveness, but doing so requires the activities to be salient in order to execute strategic goals (Buller & McEvoy, 2012). Wright and Nishii (2013) proposed a model for examining within firm variability in the process linking HR systems to firm performance. Of particular note is the distinction between intended HR practices as defined by HR decision-makers, the actual practices implemented, and perceived HR practices among employees. Consistent with "strength of the HRM system" a disconnect between intended and actual practices can occur through implementation problems while a disconnect between actual HR practices in place and employees perceptions of them can occur through communication and attribution problems.

Relatedly, Buller & McEvoy (2012) coined the term "line of sight" to describe alignment between an organization's strategy, organizational capabilities and culture, group competencies

and norms, and individual SKAs, motivation, and opportunity. As one specific component of their model, they emphasize that "line of sight" requires that HRM practices be clearly linked with the firm's strategy and internally consistent with one another, which they indicate is supported by the "strength of the HRM system." This notion was also highlighted in "strength of the HRM system" as the concept was proposed to create a strong organizational climate *for a particular strategic focus.* A strong HRM system process creates shared meanings "…in promotion of collective responses that are consistent with organizational strategic goals….." (Bowen & Ostroff, 2004: p.213).

Some empirical support for links between strategy, HRM strength, HR practices and firm performance is offered by e Cunha and e Cunha (2009) who found that strategic management orientation (existence and formalization of a mission, corporate strategy, and HRM strategy) was positively associated with HRM strength (conceptualized as a combination of strong use of practices and legitimacy of authority through HR function effectiveness and participation in strategic decisions) which in turn was positively, if weakly, associated with organizational performance. This seemingly suggests that a clear and formalized firm strategy, "strong" in a sense, can facilitate the creation of a strong HRM system. Further, the alignment between strategic decision-makers and HR decision-makers directly points to the consistency feature within a strong HRM system. It should help in the avoidance of sending double-bind messages or two inconsistent messages that create confusion, cause cognitive dissonance, and make it difficult to respond appropriately (Bateson, Jackson, Haley & Weakland, 1956).

HRM Architecture

HRM architecture, focusing on the configurations of HR strategies, policies and practices for different groups of employees, rests on two premises. First is that there need to be to

linkages between the HRM activities of philosophy, policy, practices, processes and organizational climate (Arthur & Boyles, 2007; Becker & Gerhart, 1996; Kepes & Delery, 2006). This premise is similar to the Strategic HRM notion above that there must well-connected linkages between intended and actual practices and employee perceptions of them. Second is that different HR systems need to exist within an organization because different employee groups contribute differently (Delery & Shaw 2001; Lepak & Snell, 1999; 2002). Together, HRM architecture refers to the linkages among HRM activities within each of the different HRM systems in the organization (Kepes & Delery, 2007).

The components of each HRM system that make up its architecture include philosophy (guiding principles and values about human resources), policies (guidelines about what is to be achieved with practices, e.g., skill development), practices (the practices needed to achieve the policy), and processes (how practices are implemented). Kepes and Delery (2006) also distinguish between broad-based organizational climate that stems from perceptions of the policies, practices and processes that are carried out across all employees and more specific climates within each HR system in the organization that are focused around the HRM architecture implemented for subgroups of employees.

We contend that features of a strong HRM system are the building blocks for linking the HRM activities together in a particular architecture. More specifically, the features of legitimacy of authority of the HR decision-makers who are highly credible and have higher level positions in the organization and consensus among HR decision-makers will enable the development of a philosophy, policies, and ultimately a set of practices that are internally consistent and relevant to organizational goals while successful process and implementation of practices rests on ensuring that practices are distinctive and attended to, send consistent messages, and are fair. The net

result will be effective and strong HR systems that foster consensus among employees in their perceptions of the practices and the climate they infer and represent. A strong HRM system and architecture is what will contribute to the human resources (people) being a rare and difficult to imitate resource for the firm (Barney, 1991; Nyberg, Moliterno, Hale, & Lepak, 2014) that can contribute to future value creation for the organization (Lepak, Smith, & Taylor, 2007). In coordinated management of meaning, "persons collectively create and manage social reality" (Pearce & Cronen, 1980, p 305), yet it cannot be done unilaterally or in a single act. Social order as well as social change is a co-constructed recursive process through people, relationships and institutes (Pearce & Pearce, 2000). This suggests the importance of multiple features of HRM strength and delivery agents to allow for the appropriate construction of social-psychological constructs based on the total HR strategy and HRM architecture.

Implications for How HR Systems and Features of HRM Strength Operate Together

In "strength of the HR system" we did not explicitly address how the features (grouped into distinctiveness, consistency, and consensus) operate together in conjunction with HR practices in creating strong situations, organizational climate, and enhancing firm performance. We contend that future research is needed to explore a) overall HRM system strength as a continuum, b) how strength may not be possible unless a few, select HRM strength features are present as precursors for the development of other features, c) equifinality in that different configurations of features may be equally effective for firm performance.

Continuums and Nonlinearity. One way in which HRM strength can be studied is with an additive model or combination across of the features, with higher scores representing greater HRM strength, i.e. a continuum from low to high strength. This type of conceptualization and

operationalization assumes a compensatory model whereby having greater amounts of one feature might compensate for lower amounts of other features.

Building on the notion that there is unlikely to be a single optimal HRM architecture for managing all employees (Jackson, Schuler & Rivero, 1989; Lepak & Snell, 1999) alludes to the notion that there may be different amounts or levels of HRM system strength needed for different architectures. Lepak and Snell (1999; 2002) developed and tested a two by two typology of HRM architecture along the dimensions of uniqueness of human capital (rare and specialized) and strategic value of human capital (potential to improve effectiveness). Core knowledge workers and traditional employees are internalized within the firm while external partners and those with contractual work arrangements are externalized, each of which requires a different HR architecture and employment relationship to manage effectively.

In our original conceptualization, we argued that development of a strong HRM system process is critical for any type of content of the HR system, but may be more difficult for some types of systems. Our thinking today has moved toward both a continuum of HRM strength from low to high and potential nonlinearity in its effect. For example, although arguably not a direct test of HRM strength, a greater number of experienced HR practices was related to employee's satisfaction and commitment with a tipping point whereby a large number of practices had to be experienced before relationships to attitudes materialized (White & Bryson, 2013).

Kepes and Delery (2006) purport that HRM system strength is critical to effective HRM architecture *within* each HRM system for the different workforce groups in the organization to allow for distinct sub-climates stemming from the HRM system to emerge. In contrast, we purport that development of a strong HRM system process across all meta-features may not be desirable or necessary for all types of HR systems and architectures. Higher HRM system

strength would likely be crucial for core and traditional internalized employees in order for higher-order social context constructs, such as climate, to emerge and for the overall organization to capitalize on collectivities. However, development of a strong HRM system requires considerable time, effort, and resources. For externalized workforces such as alliances or contract workers (Fontinha, Chambel & Cuyper, 2012; Lepak & Snell, 1999), the cost-benefit ratio of developing a strong HRM system may be lower. Moderate levels of HRM strength, rather than low or high strength, may have more utility for these workforces and architectures. This could be particularly true for alliances whereby there are partner relationships with little interaction among these partners negating the importance of shared climate and collective effects.

Similar arguments for a continuum and nonlinearity of strength apply to the content of HR systems. Original conceptions of HR systems focused on the notion of equifinality whereby different types of HR systems may be equally effectively for firm performance depending on strategy, industry and contextual factors (e.g., Delery & Doty, 1996; Miles & Snow, 1984). Two types of systems were first studied – one focusing on commitment maximizing practices similar to high performance work systems (HPWS) and the other focusing on cost reduction or traditional monitoring and control systems (Arthur, 1992; Ichniowski et al., 1997). These systems are now typically referred to in parlance as “high road” and “low road” with low road either being traditional systems or the use of few HR practices (Gittel & Bamber, 2010). The dual focus was replaced when Huselid (1995) and Becker & Huselid (1998) argued for a universal set of best practices in the form of a HPWS and demonstrated that a greater use of this set of practices was related to better firm performance. Since that time, investigations of HPWS have dominated the literature.

Few studies continue to compare “high road” and “low road” systems or to examine multiple types of HR systems (see Gittell & Bamber, 2010; Lepak & Snell, 2002; Monks et al., 2013; Toh, Morgeson, & Campion, 2008 for exceptions). We find that unfortunate. First, the focus on a single best system does not allow for ascertaining the true efficacy of HPWS and the conditions under which it may be more or less effective than other systems (Guest, 2011). Second, specific to “strength of the HRM system” we proposed that developing HR system strength may be more important for some types of systems than for others and that relationships between strength and the content of HR systems should be investigated. In particular we proposed that it may be more important and also more difficult to create HR system strength for the “high road” systems. Meta-analyses of high performance work systems, have consistently been related to firm performance (Combs, Liu, Hall & Ketchen, 2006) with different components of the system shown to have their effects on performance through the mediators of human capital development and motivating employees (Jiang, Lepak, Hu & Baer, 2012). Corrected effect sizes in meta-analytic sizes range around .2. While this is statistically and practically meaningful when converted to productivity and dollar amounts, it is still relatively small. It is likely that HR systems that are more on the “high road” end of the continuum require the strongest HRM system strength or the incorporation of more of the meta-features originally proposed to be optimally effective while those on the lower end, require only moderate levels of system strength. More research contrasting the high road with the low road is clearly needed in different kinds of firms and industries.

Consensus as a Precursor. A second way that the features of HRM strength can be considered is through a process of necessary but insufficient condition for strength to develop or that some features may be precursors for the development of other features. As we explained in

"strength of the HRM system," consensus among key decision makers about the HR practices and message is necessary for enhancing distinctiveness of the practices and consistency in their administration. With consensus among decision-makers and agents of the HR system (e.g., lower level leaders), a larger number of people send similar communications which enhances distinctiveness and visibility of the practices, thereby helping to promote shared perceptions of the practices among employees. Likewise, lack of consensus among leaders and HR professionals makes it difficult to send consistent messages across employees. We now argue more explicitly that consensus is a necessary precursor to the manifestation of other components of HRM strength. Consensus allows for consistency in developing internally consistent sets of practices and consistency in administering practices which in turns enhances their distinctiveness, making them clear, visible, and understandable to employees. Failure to take the necessity for consensus into account may explain some of the aforementioned inconsistencies in factor structures and some of the weaker findings on the importance of HRM system strength and HPWS.

Configurations of HRM strength features. A third way in which the nine features outlined in "strength of the HRM system" may operate is through a configural approach. Configural approaches to the study of social-psychological constructs such as organizational culture and climate have been gaining momentum and highlight that the particular pattern of elements (which dimensions are high and which are low) is important (Ostroff & Schulte, 2014). In this approach, the assumption is that the features operate together in interdependent ways. Further, some configurations or patterns across dimensions may be more important for outcomes than others, and different configurations may be equally effective. For example, different configurations of climate dimensions were found to be more or less important for employee

attitudes compared to configurations for customer service and financial performance (Schulte, Ostroff, Shmulyian, & Kinicki (2009). Applying this notion to HRM system strength suggests that some patterns across the nine features may be more important for achieving some facets of organizational performance (e.g., loyalty) than for other facets of organizational performance (e.g., high-tech innovativeness). Further, some features of HRM strength may be needed for some HRM architectures than for others. For example, making practices distinctive so that employees attend to them and know what is valued and rewarded may be more important than consistency (especially consistency over people and time) across employees for alliances and contract workers who will typically interact less with one another and have more limited investments in the organization.

We strongly encourage research about these three ways of conceiving of how the nine features outlined for HRM system strength might operate together. In particular, comparisons of the three approaches, as opposed to simple additive or compensatory models with HRM strength viewed as a linear composite are needed.

Implications for Social-Psychological Constructs

Pivoting from the focus on linkages between HRM system strength and strategy and HRM architecture, we turn to the implications of HRM system strength for how employees view the exchange agreements between them and their employers in the form of social-psychological contracts. The signaling and communication function of HR systems and HR system strength leads employee to derive interpretations of the context in terms of what is expected, valued and rewarded. These interpretations form the basis of psychological and organizational climate and exchange relationships in the form of psychological and normative contracts.

Psychological and Normative Contracts. There has been a resurgence of interest in the role of psychological contracts for understanding employee-organization relationships and the role of HRM practices in these contracts (Bal, Kooij & De Jong, 2013; Guest, 2007; Katou, 2015; Sonnenberg, Koene & Paauwe, 2011). Psychological (individual) and normative (shared) contracts have been argued to be a linking pin between HR practices and responses at both the individual and higher level of analysis because they represent the exchange agreements between employers and employees as perceived by employees (Ostroff & Bowen, 2000).

The literature on both psychological and normative contracts emphasizes that they exist in a variety of different forms within organizations. For example, Rousseau (1995) distinguished between transactional and relational contracts. Transactional contracts have very specific performance requirements in their terms of exchange and cover a limited time period. Relational psychological contracts are less defined. They frame an open-ended membership with incomplete or ambiguous performance requirements. “Low road” HRM systems purportedly give managers greater transactional control with practices geared toward directing workers while “high-road” HRM systems have been argued to give more relational control and autonomy to employees, thereby creating these different psychological contracts (Guest, 2007).

The degree of difficulty in building a strong HRM system to promote contracts will likely vary across types of contracts desired. This will be particularly challenging given a greater shift to I-deals or idiosyncratic contracts where psychological contracts are negotiated between the employee and line manager (Rousseau, 2001). We predict that strong HRM systems are more easily formed for transactional contracts than for relational contracts. It will be less of a challenge to have HRM practices create uniform constructions of a situation and uniform expectancies for terms of exchange that are specific about performance requirements and deal

with the short term. At the same time, we would argue that it is more difficult, but just as important, to create strong HRM systems for relational contracts. Although these contracts intentionally frame terms of exchange with less clarity about specific performance requirements than exists in transactional contracts, a strong HRM system is necessary to communicate this intentional ambiguity, unambiguously. For example, if employees are to be empowered to perform their jobs using considerable discretion to satisfy a customer, rather than conforming to strict procedures, then HRM practices still need to communicate this clearly to all employees (Bowen & Pugh, 2009). Some evidence of this can be gleaned from a study by Dickson, Resick and Hanges (2006) in which strong climates (high consensus among employees) were important for both mechanistic and organic organizational forms. This suggests that while individual employees' behaviors may differ in order to be innovative or discretionary, all employees should still share the idea that this type of innovative and discretionary behavior is what is expected of them. Thus, perceptions of the contract can become similar with a strong HRM system that encourages innovative or discretionary behavior, for example, but there may be variance in actual behavior.

Furthering Climate Strength Theory and Research

A key premise in "strength of the HRM system" was that the outcome of a strong HRM system would be climate strength (low variability across employees in their climate perceptions), regardless of the HR content. Unfortunately, little research has directly explored this notion (Aksoy & Bayazit, 2014). Nonetheless, our work on HRM system strength informs research on climate (see Hong et al., 2013) and the climate strength construct. Research on climate strength has been burgeoning with some studies showing that the higher consensus or higher climate strength has direct effects on unit outcomes because the similarity in perceptions leads to more

typical behaviors across unit members (Lindell & Brandt, 2000; Gonzalez-Roma, Peiro & Tordera, 2002; Sowinski, Fortmann, & Lezotte; 2008). Other research demonstrates that the climate strength moderates the relationship between climate level or content and outcomes (e.g., Colquitt, Noe, & Jackson, 2002; Gonzalez-Roma, Fortes-Ferreira, & Peiro, 2009; Schneider, Salvaggio, & Subarits, 2002).

Further exploration is needed in three key areas of climate strength in relation to HRM system strength. First, a number of factors have been explored in the emergence of climate consensus - interactions and social processes among employees, leader attributes, homogeneity of employees and structural variables (Fulmer & Ostroff, 2015). The relative importance of these factors vis a vis the importance of HRM system strength has not been explored. In "strength of the HRM system," we proposed that strong HR process is paramount because while generic interactions and communication among employees may result in shared perceptions of a climate, the emergent climate could be one that was not intended. Additional questions of interest thus pertain to whether the factors that help form consensus in climate are substitutes for a strong HRM system or whether a strong HRM system negates the need for these other emergent factors.

Second, the pattern of agreement among employees has been demonstrated to be as important as the amount of agreement in climate perceptions (Gonzalez-Roma & Hernandez, 2014). That is, two units can have the same standard deviation across employees in climate perceptions, but in one unit employee perceptions are evenly distributed across the range of climate values whereas in the second unit, there are two clear subgroups of employees who agree within subgroup on the climate but differ from one another. This suggests that an overall weak HRM system process may produce low consensus with different views across the group of

employees whereas when some features are present, such as distinctiveness, but not others, bifurcated patterns of climate may emerge. These type of patterns can be further explored through adaptive structuration theory (Poole, Siebold & McPhee; 1987; De Sanctis & Poole, 1994) with the core concept that groups craft and reinforce their social context but do not always realize they are doing so. Further, implicit hierarchies of communication and rule structures emerge whereby "some people make things happen. Some people watch thing happen. Some people have things happen to them. Some people don't even know things are happening" (Griffin, 2009, p. 244). HRM system strength should enable more uniform patterns of perceptions.

Third, as alluded to when discussing nonlinearity of HRM system strength, the same may be true for climate strength. That is, as Pierce and Aguinis (2013) demonstrate, there can be "too much of a good thing" and nonlinear U-shaped relationships are present in a wide range of individual and contextual variables. This notion may apply to climate strength (e.g., Dawson, Gonzalez-Roma, Davis, & West, 2008; Dickson, Resick, & Hanges, 2006). Very high consensus could restrict the range of perspectives in the group while very low consensus may lead to conflict, both of which could drive down unit performance outcomes (Dawson et al. 2008). Creating a very strong situation (Mischel, 1973) through climate strength means individuals will perceive events similarly and have similar attitudes, expectations and behaviors. Consensus provides a social context for unit members (Bliese & Britt, 2001) and can create a sense of belonging, sharedness, and motivation to maintain cohesiveness. A potential downside of strong consensus and very strong climate is groupthink (Janis, 1972) and failure to question leaders or decisions appropriately. Groupthink is likely to occur when there is high consensus and a strong drive for consensus (Esser, 1998). Relatedly, a very strong climate may stifle voice behavior,

defined as communicating ideas or opinions to improve functioning in the unit or organization (Morrison, Wheeler-Smith & Kamdar, 2011) due to the drive to maintain consensus and harmony, again making performance less than optimal. Thus, explorations about the implications of moderate climate strength are sorely needed as they relate to collective attitudes, behavior, particularly innovation, and ultimately unit or organizational effectiveness.

Lastly, the "signals" employees interpret in forming their climate perceptions emanate from sources other than HRM practices but are potentially amplified by the strength of the HRM system. Bowen and Schneider (2014: p.12), building on Bowen and Ostroff (2004), as a future research direction proposed that "…the more the overall bundle of service-focused tactics in HRM, marketing, operations and the servicescape are high in distinctiveness, consistency, and consensus, the stronger the service climate will be." In other words, the strength of the overall bundle of practices that also incorporates the attributes of a strong HRM system drives climate strength.

In sum, HR systems are designed to reflect a central purpose of organizations – that of coordination – or the process that integrates discrete activities into a collective set of interdependent tasks in order to maximize effectiveness. Coordination mechanisms, such as human resource practices, routines, and communications, should create shared understandings of the work process which, in turn, enables employees to act in concert toward the achievement of organizational goals (Okhuysen & Bechky, 2009). Yet, "representational gaps" across employees about what is to be accomplished and how to accomplish it often exist and lower effectiveness (Cronin & Weingart, 2007). The lack of common understandings creates process loss, i.e., coordination is hampered and it is impossible to capitalize on "more than the sum of the

parts." Thus, in the remainder of this reflection, we turn to the multiple stakeholders in organizations and the gaps in understanding that can occur in different stakeholder groups.

MULTIPLE STAKEHOLDERS' PERSPECTIVE ON HRM SYSTEM STRENGTH

A multiple stakeholder perspective of organization has long been enmeshed in organizational science. The notion that organizations operate in multiple domains and must satisfy different constituents such as internal employees, leaders, customers, boards of directors, and stockholders has been evident in many arenas including organizational effectiveness (e.g., Cameron, 1986; Verbeke & Tung, 2013), strategic HR (e.g., Schuler & Jackson, 2005), corporate social responsibility (e.g., Hillman & Keim, 2001) and climate (e.g., Burke, Borucki & Hurley, 1992). We focus on the leaders, employees, and customers as stakeholders in relation to HRM system strength.

The Role of Leaders

Leaders at all hierarchical levels have long been deemed key for implementing HR policies and practices (e.g., Guest, 1997; Lado & Wilson, 1994; Lepak & Snell, 1999) as well as for creating the climate (e.g., Kozlowski & Doherty, 1989; Rentsch, 1990). Based on "strength of the HRM system," a growing body of research has focused on comparisons of managers and employees views of the HR practices.

Surprisingly, relationships between line managers' reports of the practices in place in their unit and employees' reports of their experiences with the practices are small, typically in range of a .20 correlation (cf., Aryee et al., 2012; Den Hartog et al., 2013; Liao et al., 2009; Vermeeren, 2014). Although stronger relationships were observed by Jensen, Patel, and Messersmith (2013), non-commensurate measures across the manager and employee groups were used which may explain this result. This discrepancy is consistent with the potential for a

mismatch between actual practices and experienced practices as addressed by Wright and Nishii (2013). Similarly, significant differences between CEOs, HR directors, and senior managers in HRM priorities and practices have been found (Bartram, Stanton, Leggat, Casimir, & Fraser, 2007). These results are revealing. The wide variability across employees within the same unit about the experienced HR practices and the wide variability in managers' reports about practices across units in an organization speaks volumes about the need for HRM system strength and the importance of leaders at all levels in facilitating a strong HRM system.

These findings are consistent with the growing literature on "representational gaps" in the cognitions and perceptions across team members and between teams (Cronin & Weingart, 2007). A growing body of evidence indicates that representational gaps exist and that they diminish individual and unit effectiveness, for example, gaps among team members in their understanding of their team's goals and activities (Cronin, Bezrukova, Weingart & Tinsley, 2011) and gaps between networked teams who need to coordinate effort (Firth, Hollenbeck, Miles, Ilgen & Barnes, 2015). Again, this reinforces the need for attention to how to implement a HR system a way that clearly sends the signals to employees about what is expected, valued and rewarded and enables common interpretations.

We also propose that attention be devoted to a trickle-down effect among leaders. Based on the results of a case study, CEO's were found to be critical in providing HR legitimacy and fostering consensus among the top management team; in turn, senior managers needed to convey consistent HR messages and provide support and direction to lower level managers in order for strong and effective HR systems to be realized (Stanton et al. 2010). This point echoes our earlier contention about the need for consensus among leaders to be present first and foremost in order for consistency and distinctiveness to have their intended effect. When lower level leaders

provide consistent communication and enforce practices in consistent ways, they will help clarify expectations and behavior-outcome contingencies for employees thereby creating a strong climate within their unit (Zohar & Luria, 2004, 2010). To the extent that leaders convey messages consistently over people, time, and events, employees should be able to infer the appropriate attribution about the environment and do so in similar ways fostering consensus (Morgeson & Hofmann, 1999; Weick, 1995). Indeed, high quality communication from leaders reduced the gap between line managers' and their employees' reports of HR practices in use (Den Hartog et al., 2013). Additional research is needed to explore leader factors and styles that work in conjunction with features of a strong HRM system in order to reduce gaps between intended, actual, and experienced practices and climate. Further, there can be frequent, distinct communication about the HR practices from the top leaders; however if they are not implemented or enforced consistently, the result is still likely to be idiosyncratic perceptions or an unintended climate. Indeed, the literature on social conformity shows that not only do people change their perceptions or behaviors to that of others, conformity occurs even when knowingly wrong information originates from other people (e.g., Claidière & Whiten, 2012; Edelson, Sharot, Dolan, & Dudai, 2011; Nord, 1969). Thus, focusing on both the characteristics of message senders (HR decision-makers and leaders at all levels) in conjunction with the characteristics and meta-features of a strong HRM system is needed to further our understanding of HR content, process and outcomes.

Employees within HRM Systems

While our intent in "on the strength of the HRM system" was on the power of situations to produce similar expectations and behaviors from employees, we acknowledge that individual employees may differ in their interpretations and attributions, leading to different responses to

the situation. Indeed, as mentioned earlier, the majority of the empirical studies testing assumptions of HRM strength focused on the individual level of analysis and idiosyncratic interpretations of the HR system. That is, the studies purporting to test our framework focused on understanding individual employees as a "receiver" (Guzzo & Noonan, 1994) of the communicative content of HR practices. Drawing from Eagly and Chaiken (1993), employees make interpretations of HR practices by automatically processing signals superficially or systemically by attending to stimuli, evaluating and comparing to present knowledge and belief and making inferences about how this might affect one's responses. More recently, nonconscious processing has been examined in which people process social information without it being mediated by conscious awareness (e.g., Leiwicki, 2013). The various types of social information processing can be conceived of as forms of sense-making with varying degrees of conscious awareness.

Weick (2012) explicates how collective understanding is based on communication and conversations. This discourse is distributed throughout the organization in multiple, overlapping, and loosely connected conversations until it is articulated by an actor with credibility and knowledge. This articulation enables people to understand what they are saying and what it might mean as a collective. Likewise, actions that occur in the organization can prompt new conversation patterns that then need to go through a collective sense-making process to understand the action and what it means. It is here that features of strong HRM systems can play a key role in helping to both shape and articulate collective sense-making as employees receive and messages that form communication patterns and allow interpretations to ensue.

What triggers systematic processing of HRM communications was of interest to Guzzo and Noonan (1994) due to the probability that the messages sent by every day HRM practices

likely only receive superficial, automatic processing, making them less salient and creating more variability across employees in their interpretations. Situational triggers such as an organizational downturn or change initiatives can create a situation which leads to greater systematic conscious processing of messages. That is, employees' sense-making is significantly elevated during periods of change (Weick, 2012). This is a time when attention to building a strong HRM system could have a critical impact in shaping the direction of collective meaning. Change can break down shared meanings and perceptions causing a shift in the level of analysis at which the construct exists (Dansereau, Yammarino, & Kohles, 1999). From our perspective, changes in the HRM system may initially cause discord and disagreement among individuals in the organization, particularly if the changes are not initially adopted in a way that is consistent with a strong system. Hence a previously homogenous group with shared perceptions that lead to an organizational climate and normative contract may lose their "agreement" and the higher level constructs would not emerge, or would not emerge as intended, from individual perceptions.

During periods of change as well as during periods of relative stability, HRM system strength is still important to continue to reinforce collective understanding whether systematically, automatically or unconsciously processed. While we proposed theoretical rationales for the meta-features that should be present (grouped into distinctiveness, consistency, consensus), we did not specifically attend to the content and framing of the messages sent by actors (leaders and HR professionals) in the organization. Incorporating theories and research from cognitive psychology (e.g., Khaneman, 2011) and behavioral economics may be useful in this regard to "nudge" (Johnson et al., 2012; Thaler & Sunstein, 2008) research and practice in preferred directions.

The framing of communications around gain/loss (Tversky & Kahneman, 1981) could have utility in HR messages. For example, when unit-based incentives or rewards are used, communications could be framed as "we each receive a bonus if we meet this goal" versus "base pay remains the same unless we achieve this goal." Similarly, framing might induce different reactions to benefit plan options or incentives to participate in health programs, such as "discount for participating in a wellness program" versus "additional premium for nonparticipation in wellness program. The framing of the HR communications should have implications for sense-making process, motivation, and employees' attributions about the intent of the HR practice as looking out for employees versus exploiting employees. Approaches from choice architecture (e.g., Bernatzi & Thaler, 2007; Botti & Iyengar, 2006; Iyengar & Lepper, 2000; Thaler, Sunstein, & Balz, 2014) suggest that the framing of choices, number of choices and whether choice is provided also sends signals and prompts different responses. For example, "opt out" approaches tend to increase participation, such as automatically signing up employees for a new plan or training program and employees must actively choose to opt out of the program.

Similarly, relying on the power of social mechanisms is worthy of exploration. Not only is understanding of the context shaped by the perception of others (Salancik & Pfeffer, 1978), choices and behaviors are also shaped by social norms or perceptions that others are engaging in the same actions (e.g., Cialdini & Goldstein, 2004; Cialdini, 2009). The social norm approach shapes attitudes and behavior by explicitly telling people about the behavior and attitudes of others. This suggests that HR agents or leaders might capitalize on this tendency in their communications about various practices to help develop HRM strength. For example, indicating the percentage of people who have taken training and development offerings, suggested changes, engaged in pro-environmental behaviors at work, participated in health and well-being programs,

and the like may help spread the behaviors desired from the implemented practices. The social norm approach may be particularly effective when people are confronted with multiple options; relying on opinions or behaviors of others allows for collaborative filtering of choices thereby making choices and responses easier (e.g., Harper, Konstan, & Li, 2010).

Finally, people have a need to reduce uncertainly, particularly when confronted with ambiguous situations. Uncertainty reduction theory (Berger & Calabrese, 1975) indicates that that as the amount of communication and shared communication networks increase, uncertainty is reduced. Importantly, the need for information seeking also decreases as uncertainly decreases. Information seeking tactics such as observation, experimentation, trial and error, written materials, and reliance on peers, supervisors and mentors are effective for learning about the context (Miller & Jablin, 1991; Jablin, 1996) but also come at a cost in terms of employees' effort and time and may build similar cognitive maps of the context. Miller and Gordon (2014) apply the metaphor of trading zones to emphasize the needed relationships between the HRM communication environment, communication roles, and communication competencies as a way enable better collaborations and exchanges. Building HRM strength in this way should help reduce the need for information-seeking behaviors on the part of employees.

The Impact of HRM on Customers

There is a long-standing stream of "linkage" research which reveals that employee perceptions of their internal human resource practices are linked to the attitudes and perceptions of external customers through service organization climate as a mediator (e.g. see Bowen & Schneider, 2014; Hong et al., 2013 for reviews). Both reviews touch on how both HRM system strength and climate strength can enhance such linkages that end with customer perception,

attitudes, and outcomes, and even firm performance. Linkage research was also, in effect, validating internal HR practices against external customer criteria.

More recently, the customer is also receiving overdue attention in the strategic management literature (e.g., Gustafsson, Kristensson, & Witell, 2012; Lepak et al., 2007; Priem, 2007; Schmidt & Keil, 2013). Coincidentally, given our now writing our own AMR Decade Award follow-up, a central driver of the emergence of the customer in the strategy literature was the 2011 Decade Award Winner for Priem and Butler (2001), followed by Priem (2007), "A Consumer Perspective on Value-Creation" and Priem, Butler and Li (2013). Priem and his colleagues challenge the dominance of the Resource Based View (RBV) of the firm as too internally and supply side dominant, under-attending to the demand side. They advance a consumer-benefit experienced perspective in strategy that makes value creation for the consumer more centrally-positioned in the field. In other words, they focus on the importance of customers as key resources for firms, which may have implications for HRM strength.

In short, the relevance here is that future theory-building and research should examine how the strength of the HRM system can be a factor in employees behaving in ways that add value to the consumer. Also, in reverse, how does the customer mix potentially affect the strength of the HRM system and the climate, e.g. climate for service? This notion is reflected in Ulrich and colleagues' (Ulrich, Brockbank, Johnson, Sandholtz, & Younger, 2008) focus on the importance of shared mindsets such that HR professions need to build consensus among their management team in terms of what they want the firm be known for by customers. Only after this type of consensus is reached can practices be put into place to make it salient to both customers and employees. Auh, Bowen, and Menguc (2015) take this a step further by proposing an inverse relationship between customer variability i.e. diversity of demand and high

desires to help co-produce, and the strength of the climate for service. They ask, “How much variability can a strong climate take?”

FINAL THOUGHTS

This paper attempted to offer a scholarly update. We wish we knew more, and could share more, of an update on whether the HRM strength construct has found its way into actual practice. That would be a true test of “impact” beyond number of google scholar citations. We can only hope (or hear from others) on this applied dimension. For now, we will close this paper with the same words of Dave Ulrich we used to close the 2004 paper, because they are so worth remembering: “To make HR practices more than isolated acts, managers and HR professionals must master the theory behind HR work; they need to be able to explain conceptually *how* and *why* HR practices lead to their outcomes…” (1997: p. 238). Our wish is that this follow-up contributes to managers and HR professionals being able to do so.

REFERENCES

Aksoy, E., & Bayazit, M. 2014. The Relationships Between MBO System Strength and Goal-Climate Quality and Strength. ***Human Resource Management***, 53: 505-525.

Arthur, J. B.1992. The link between business strategy and industrial relations systems in American steel minimills. ***Industrial and Labor Relations Review***, 45: 488-506.

Arthur, J. B. 1994. Effects of human resource systems on manufacturing performance and turnover. ***Academy of Management journal***, 37: 670-687.

Arthur, J. B., & Boyles, T. 2007. Validating the human resource system structure: A levels-based strategic HRM approach. ***Human Resource Management Review***, 17: 77-92.

Aryee, S., Walumbwa, F. O., Seidu, E. Y., & Otaye, L. E. 2012. Impact of high-performance work systems on individual-and branch-level performance: test of a multilevel model of intermediate linkages. ***Journal of Applied Psychology,*** 97: 287-300.

Auh, S., Bowen, D. E., and Menguc, B. 2015. A search for missing links: Specifying the relationship between leader-member exchange differentiation and service climate. Manuscript under revision review.

Bal, P. M., Kooij, D. T. A. M., & De Jong, S. B. 2013. How Do Developmental and Accommodative HRM Enhance Employee Engagement and Commitment? The Role of Psychological Contract and SOC Strategies. ***Journal of Management Studies***, 50: 545-572.

Barney, J. 1991. Firm Resources and Sustained Competitive Advantage. ***Journal of Management***, 17: 99-120.

Bartram, T., Stanton, P., Leggat, S., Casimir, G., & Fraser, B. 2007. Lost in translation: exploring the link between HRM and performance in healthcare. ***Human Resource Management Journal***, 17: 21-41.

Bateson, G., Jackson, D. D., Haley, J. & Weakland, J. H. (1956). Toward a theory of schizophrenia. ***Behavioral Science***, 1: 251-264.

Becker, B., & Gerhart, B. 1996. The Impact of Human Resource Management on Organizational Performance: Progress and Prospects. ***The Academy of Management Journal***, 39: 779-801.

Becker, B. E., & Huselid, M. A. 1998. High performance work systems and firm performance: A synthesis of research and managerial implications. ***Research in Personnel and Human Resource Management***, 16: 53-101.

Bednall, T. C., Sanders, K., & Runhaar, P. 2014. Stimulating informal learning activities through perceptions of performance appraisal quality and HRM system strength: A two-wave study. ***Academy of Management Learning & Education***, 13: 45-61.

Benartzi, S., & Thaler, R. H. 2007. Heuristics and biases in retirement savings behavior. ***The Journal of Economic Perspectives***, 21: 81-104.

Berger, C. R., & Calabrese, R. J. 1975. Some explorations in initial interaction and beyond: Toward a developmental theory of interpersonal communication. ***Human Communication Research,*** 1, 99-112.

Bliese, P. D., & Britt, T. W. 2001. Social support, group consensus and stressor–strain relationships: social context matters. ***Journal of Organizational Behavior***, 22: 425-436.

Botti, S., & Iyengar, S. S. 2006. The dark side of choice: When choice impairs social welfare. ***Journal of Public Policy & Marketing***, 25: 24-38.

Bowen, D. E., & Ostroff, C. 2004. Understanding HRM-Firm Performance Linkages: The Role of the "Strength" of the HRM System. ***The Academy of Management Review***, 29: 203-221.

Bowen, D. E., & Pugh, S. D. 2009. Linking human resource management and customer outcomes. ***The Routledge Companion to Strategic Human Resource Management***, 502-518.

Bowen, D. E., & Schneider, B. 2014. A service climate synthesis and future research agenda. ***Journal of Service Research***, 17: 5-22.

Buller, P. F., & McEvoy, G. M. 2012. Strategy, human resource management and performance: Sharpening line of sight. ***Human Resource Management Review***, 22: 43-56.

Burke, M. J., Borucki, C. C., & Hurley, A. E. 1992. Reconceptualizing psychological climate in a retail service environment: A multiple-stakeholder perspective. ***Journal of Applied Psychology***, 77: 717-729.

Cameron, K. S. 1986. Effectiveness as paradox: Consensus and conflict in conceptions of organizational effectiveness. ***Management Science***, 32: 539-553.

Chen, S. J., Lin, P. F., Lu, C. M., & Tsao, C. W. 2007. The moderation effect of HR strength on the relationship between employee commitment and job performance. ***Social Behavior and Personality: an international journal,*** *35*: 1121-1138.

Cialdini, R. B. 2009. ***Influence: Science and practice*** (Vol. 4). Boston: Pearson Education.

Cialdini, R. B., & Goldstein, N. J. 2004. Social influence: Compliance and conformity. ***Annual Review of Psychology***, 55: 591-621.

Claidière, N., & Whiten, A. 2012. Integrating the study of conformity and culture in humans and nonhuman animals. ***Psychological Bulletin***, 138: 126.

Coelho, J. P., Cunha, R.C., Gomes, J. F. S., & Correia, A. G. 2012. Developing and Validating a Measure of the Strength of the HRM System: Operationalizing the Construct and Relationships Among its Dimensions. Working Paper 0562, Nova School of Business and Economics.

Colquitt, J. A., Noe, R. A., & Jackson, C. L. 2002. Justice in teams: Antecedents and consequences of procedural justice climate. ***Personnel Psychology***, 55: 83-109.

Combs, J., Liu, Y., Hall, A., & Ketchen, D. 2006. How much do high-performance work practices matter? A meta-analysis of their effect on organizational performance. ***Personnel Psychology,*** 59: 501-528.

Cronin, M. A., Bezrukova, K., Weingart, L. R., & Tinsley, C. H. 2011. Subgroups within a team: The role of cognitive and affective integration. **Journal of Organizational Behavior,** 32: 831-849.

Cronin, M. A., & Weingart, L. R. 2007. Representational gaps, information processing, and conflict in functionally diverse teams. ***Academy of Management Review***, 32: 761-773.

Dansereau, F., Yammarino, F. J., & Kohles, J. C. 1999. Multiple Levels of Analysis from a Longitudinal Perspective: Some Implications for Theory Building. ***The Academy of Management Review,*** 24: 346-357.

Dawson, J., González-Romá, V., Davis, A., & West, M. 2008. Organizational climate and climate strength in UK hospitals. ***European Journal of Work and Organizational Psychology,*** 17: 89-111.

DeSanctis, G., & Poole, M. S. 1994. Capturing the complexity in advanced technology use: Adaptive structuration theory. ***Organization science***, 5*:* 121-147.

De Winne, S., Delmotte, J., Gilbert, C., & Sels, L. 2013. Comparing and explaining HR department effectiveness assessments: evidence from line managers and trade union representatives. ***The International Journal of Human Resource Management,*** 24: 1708-1735.

Delery, J. E., & Doty, D. H. 1996. Modes of Theorizing in Strategic Human Resource Management: Tests of Universalistic, Contingency, and Configurational Performance Predictions. ***The Academy of Management Journal,*** 39: 802-835.

Delery, J. E., & Shaw, J. D. 2001. The strategic management of people in work organizations: Review, synthesis and extension. . ***Research in Personnel and Human Resources Management***, 20: 165-197.

Delmotte, J., De Winne, S., & Sels, L. 2012. Toward an assessment of perceived HRM system strength: scale development and validation. ***The International Journal of Human Resource Management,*** 23: 1481-1506.

Den Hartog, D. N., Boon, C., Verburg, R. M., & Croon, M. A. 2013. HRM, Communication, Satisfaction, and Perceived Performance A Cross-Level Test. ***Journal of Management,*** 39: 1637-1665.

Dickson, M. W., Resick, C. J., & Hanges, P. J. 2006. When Organizational Climate Is Unambiguous, It Is Also Strong. ***Journal of Applied Psychology***, 91: 351-364.

e Cunha, R. & e Cunha, M. P. 2009. Impact of strategy, strength of the HRM system and HRM bundles on organizational performance. ***Problems and Perspectives in Management***, 7: 57-69.

Eagly, A. H., & Chaiken, S. 1993. ***The Psychology of Attitudes***. Harcourt Brace Jovanovich College Publishers.

Edelson, M., Sharot, T., Dolan, R. J., & Dudai, Y. 2011. Following the crowd: brain substrates of long-term memory conformity. ***Science***, 333: 108-111.

Esser, J. K. 1998. Alive and Well after 25 Years: A Review of Groupthink Research. ***Organizational Behavior and Human Decision Processes***, 73: 116-141.

Firth, B., Hollenbeck, J., Miles, J., Ilgen, D., & Barnes, C. 2014. Same Page, Different Books: Extending Representational Gaps theory to enhance performance in multiteam systems. ***Academy of Management Journal***, 58, 813-835.

Fontinha, R., Chambel, M. J., & Cuyper, N. D. 2012. HR attributions and the dual commitment of outsourced IT workers. ***Personnel Review***, 41: 832-848.

Frenkel, S. J., & Yu, C. 2011. Managing coworker assistance through organizational identification. ***Human Performance***, 24: 387-404.

Frenkel, S. J., Li, M., & Restubog, S. L. D. 2012. Management, organizational justice and emotional exhaustion among Chinese migrant workers: evidence from two manufacturing firms. ***British Journal of Industrial Relations***, 50: 121-147.

Fulmer, C. A., & Ostroff, C. 2015. Convergence and emergence in organizations: An integrative framework and review. ***Journal of Organizational Behavior***, Doi: 10.1002/job.1987.

Gelade, G. A., & Ivery, M. 2003. The impact of human resource management and work climate on organizational performance. ***Personnel Psychology***, 56: 383-404.

Gittell, J. H., & Bamber, G. J. 2010. High- and low-road strategies for competing on costs and their implications for employment relations: international studies in the airline industry. ***The International Journal of Human Resource Management***, 21: 165-179.

Gittell, J. H., Seidner, R., & Wimbush, J. 2010. A relational model of how high-performance work systems work. ***Organization Science***, 21: 490-506.

González-Romá, V., Fortes-Ferreira, L., & Peiró, J. M. 2009. Team climate, climate strength and team performance. A longitudinal study. ***Journal of Occupational and Organizational Psychology***, 82: 511-536.

González-Romá, V. & Hernández, A., 2014. Climate uniformity: Its influence on team communication quality, task conflict, and team performance. ***Journal of Applied Psychology,*** 99: 1042-1058.

González-Romá, V., Peiró, J. M., & Tordera, N. 2002. An examination of the antecedents and moderator influences of climate strength. ***Journal of Applied Psychology,*** 87: 465.

Griffin, E. (2009). A first look at communication theory (7th edition) McGraw-Hill.

Guest, D. E., & Conway, N. 2002. Communicating the psychological contract: an employer perspective. ***Human Resource Management Journal,*** 12: 22-38.

Guest, D. E. 1997. Human resource management and performance: a review and research agenda. ***The International Journal of Human Resource Management***, 8: 263-276.

Guest, D. E. 2007. HRM and the Worker: Towards a New Psychological Contract? In P. Boxall, J. Purcell, & P. Wright, Patrick (Eds), ***Oxford Handbook of Human Resource Management:*** 128-146. New York: Oxford University Press,.

Guest, D. E. 2011. Human resource management and performance: still searching for some answers. ***Human Resource Management Journal***, 21: 3-13.

Gustafsson, A., Kristensson, P., & Witell, L. 2012. Customer co-creation in service innovation: a matter of communication? ***Journal of Service Management***, 23: 311-327.

Guzzo, R. A., & Noonan, K. A. 1994. Human resource practices as communications and the psychological contract. ***Human Resource Management,*** 33: 447-462.

Harper, Y. C. F. M., Konstan, J., & Li, S. X. 2010. Social comparisons and contributions to online communities: A field experiment on movielens. ***The American Economic Review***, 100: 1358-1398.

Hillman, A. J., & Keim, G. D. 2001. Shareholder value, stakeholder management, and social issues: what's the bottom line? **Strategic Management Journal**, 22: 125-139.

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

Huselid, M. A. 1995. The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance. ***The Academy of Management Journal***, 38: 635-672.

Ichniowski, C., Shaw, K., & Prennushi, G. 1997. The effects of human resource practices on manufacturing performance: A study of steel finishing lines. **American Economic Review**, 87: 291-313.

Iyengar, S. S., & Lepper, M. R. 2000. When choice is demotivating: Can one desire too much of a good thing? ***Journal of Personality and Social Psychology***, 79: 995 - 1006.

Jackson, S. E., Schuler, R. S., & Rivero, J. C. 1989. Organizational characteristics as predictors of personnel practices. ***Personnel Psychology***, 42: 727-786.

Janis, I. L. 1972. ***Victims of groupthink***. Boston: Houghton Mifflin.

Jensen, J. M., Patel, P. C., & Messersmith, J. G. 2013. High-performance work systems and job control consequences for anxiety, role overload, and turnover intentions. ***Journal of Management***, 39: 1699-1724.

Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. 2012. How Does Human Resource Management Influence Organizational Outcomes? A Meta-analytic Investigation of Mediating Mechanisms. ***Academy of Management Journal***, 55: 1264-1294.

Johnson, E. J., Shu, S. B., Dellaert, B. G., Fox, C., Goldstein, D. G., Häubl, G., ... & Weber, E. U. 2012 Beyond nudges: Tools of a choice architecture. ***Marketing Letters***, 23: 487-504.

Katou, A. A. 2015. Transformational leadership and organisational performance. ***Employee Relations***, 37: 329-329.

Katou, A. A., Budhwar, P.S., & Patel, C. 2014. Content vs. Process in the HRM-Performance Relationship: An Empirical Examination. ***Human resource management***, 53: 527-544.

Kehoe, R. R., & Wright, P. M. 2013. The impact of high-performance human resource practices on employees' attitudes and behaviors. ***Journal of Management***, 39: 366-391.

Kepes, S., & Delery, J. E. 2006. Designing effective human resource management systems: The issue of human resource management strategy. In R. J. Burke & C. L. Cooper (Eds.), ***The human resources revolution: Why putting people first matters***: 55−76. Amsterdam, NL: Elsevier.

Kepes, S., & Delery, J. E. 2007. HRM systems and the problem of internal fit. In P. Boxall, J. Purcell & P. M. Wright (Eds.), ***The Handbook of Human Resource Management***: 385−404. Oxford: Oxford University Press.

Kozlowski, S.W.J., & Doherty, M. L. 1989. Integration of climate and leadership: Examination of a neglected issue. ***Journal of Applied Psychology,*** 74: 546–553.

Lado, A. A., Wilson, M. C., 1994. Human resource systems and sustained competitive advantage: a competency-based perspective. ***Academy of Management Journal.*** 19: 699–727.

Lepak, D. P., & Snell, S. A. 1999. The human resource architecture: Toward a theory of human capital allocation and development. ***Academy of Management Review***, 24: 31-48.

Lepak, D. P., & Snell, S. A. 2002. Examining the human resource architecture: The relationship among human capital, employment, and human resource configurations, ***Journal of Management***, 28: 517-543.

Lepak, D. P., Smith, K. G., & Taylor, M. S. 2007. Introduction to Special Topic Forum: Value Creation and Value Capture: A Multilevel Perspective. ***The Academy of Management Review***, 32: 180-194.

Lewicki, P. 2013. ***Nonconscious social information processing***. Elsevier.

Li, X., Frenkel, S. J., & Sanders, K. 2011. Strategic HRM as process: how HR system and organizational climate strength influence Chinese employee attitudes. ***The International Journal of Human Resource Management***, 22: 1825-1842.

Liao, H., Toya, K., Lepak, D. P., & Hong, Y. 2009. Do they see eye to eye? Management and employee perspectives of high-performance work systems and influence processes on service quality. ***Journal of Applied Psychology***, 94: 371-391.

Lindell, M. K., & Brandt, C. J. 2000. Climate Quality and Climate Consensus as Mediators of the Relationship Between Organizational Antecedents and Outcomes. ***Journal of Applied Psychology***, 85: 331-348.

Miles, R. E., & Snow, C. C. 1984. Designing strategic human resources systems. ***Organizational Dynamics***, 13: 36-52.

Miller, V. D. 1996. An experimental study of newcomers' information seeking behaviors during organizational entry. ***Communication Studies***, 47: 1-24.

Miller, V. D., & Gordon, M. E. 2014. Mapping the "trading zones" of communication and human resource Management. . In V.D. Miller & M.E. Gordon (Eds.) ***Meeting the Challenge of Human Resource Management: A Communication Perspective***. Routledge.

Miller, V. D., & Jablin, F. M. 1991. Information seeking during organizational entry: Influences, tactics, and a model of the process. ***Academy of Management Review***, 16: 92-120.

Mischel, W. 1973. Toward a cognitive social learning reconceptualization of personality. ***Psychological Review***, 80: 252-283.

Monks, K., Kelly, G., Conway, E., Flood, P., Truss, K., & Hannon, E. 2013. Understanding how HR systems work: the role of HR philosophy and HR processes. ***Human Resource Management Journal***, 23: 379-395.

Morgeson, F. P., & Hofmann, D. A. 1999. The structure and function of collective constructs: implications for multilevel research and theory development. ***Academy of Management Review***, 24: 249-265.

Morrison, E. W., Wheeler-Smith, S. L., & Kamdar, D. 2011. Speaking Up in Groups: A Cross-Level Study of Group Voice Climate and Voice. ***Journal of Applied Psychology***, 96: 183-191.

Nishii, L. H., Lepak, D. P., & Schneider, B. 2008. Employee attributions of the "why" of HR practices: Their effects on employee attitudes and behaviors, and customer satisfaction. ***Personnel Psychology***, 61: 503-545.

Nord, W. R. 1969. Social exchange theory: an integrative approach to social conformity. ***Psychological Bulletin***, 71: 174-208.

Nyberg, A. J., Moliterno, T. P., Hale, D., & Lepak, D. P. 2014. Resource-based perspectives on unit-level human capital a review and integration. ***Journal of Management,*** 40: 316-346.

Okhuysen, G. A., & Bechky, B. A. 2009. Coordination in Organizations: An Integrative Perspective. ***The Academy of Management Annals***, 3: 463-502.

Ostroff, C. & Bowen, D. E. 2000. Moving HR to a higher level: Human resource practices and organizational effectiveness. In K. J. Klein & S. W. J. Kozlowski (Eds.), ***Multi-level Theories, Research and Methods in Organizations***: 211-266. San Francisco: Jossey-Bass.

Ostroff, C., & Schulte, M. 2014. A configural approach to the study of culture and climate. In B. Schneider & K.M. Barbera (Eds.), ***Handbook of Organizational Culture and Climate: An integrated perspective on research and practice*:** 532-552. Oxford: Oxford University Press.

Pearce, W. B., & Cronen, V**.** E. 1980. ***Communication. action and meaning: The creation of social realities***. New York: Praeger.

Pearce, W. B., & Pearce, K. A. 2000. Extending the theory of the coordinated management of meaning (CMM) through a community dialogue process. ***Communication Theory***, 10*:*405-423.

Pierce, J. R., & Aguinis, H. 2013. The Too-Much-of-a-Good-Thing Effect in Management. ***Journal of Management***, 39: 313-338.

Poole, M. S., Siebold, D. R., & McPhee, R. D.1987. A structurational theory of group decision-making. ***Quarterly Journal of Speech***, 71*:* 74-102.

Priem, R. L. 2007. A Consumer Perspective on Value Creation. ***The Academy of Management Review,*** 32: 219-235.

Priem, R. L., & Butler, J. E. 2001. Is the resource-based "view" a useful perspective for strategic management research? ***Academy of Management Review***, 26: 22-40.

Priem, R. L., Butler, J. E., & Li, S. 2013. Toward reimagining strategy research: Retrospection and prospection on the 2011 AMR Decade Award Article. ***Academy of Management Review***, 38: 471-489.

Rentsch, J. R. 1990. Climate and Culture: Interaction and Qualitative Differences in Organizational Meanings. ***Journal of Applied Psychology***, 75: 668-681.

Ribeiro, T. R., Coelho, J. P., & Gomes, J. F. S. 2011. HRM strength, situation strength and improvisation behavior. ***Management Research***, 9: 118-136.

Rousseau, D. M. 1995. *Psychological contracts in organizations: Understanding written and unwritten agreements.* Newbury Park, CA: Sage.

Rousseau, D. M. 2001. Schema, promise and mutuality: The building blocks of the psychological contract. ***Journal of Occupational and Organizational Psychology***, 74: 511-541.

Salancik, G. R., & Pfeffer, J. 1978. A social information processing approach to job attitudes and task design. ***Administrative Science Quarterly***, 224-253.

Sanders, K., Dorenbosch, L., & de Reuver, R. 2008. The impact of individual and shared employee perceptions of HRM on affective commitment: considering climate strength. ***Personnel Review***, 37: 412-425.

Sanders, K., Shipton, H., & Gomes, J. F. 2014. Guest Editors' Introduction: Is the HRM Process Important? Past, Current, and Future Challenges. ***Human Resource Management***, 53: 489-503.

Schmidt, J., & Keil, T. 2013. What makes a resource valuable? Identifying the drivers of firm-idiosyncratic resource value. ***Academy of Management Review***, 38: 206-228.

Schneider, B., Salvaggio, A. N., & Subirats, M. 2002. Climate Strength: A New Direction for Climate Research. ***Journal of Applied Psychology***, 87: 220–229.

Schuler, R. S., & Jackson, S. E. 2005. A quarter-century review of human resource management in the US: The growth in importance of the international perspective. ***Management Revue***, 16: 11-35.

Schulte, M., Ostroff, C., Shmulyian, S., & Kinicki, A. 2009. Organizational Climate Configurations: Relationships to Collective Attitudes, Customer Satisfaction, and Financial Performance. ***Journal of Applied Psychology***, 94: 618-634.

Sonnenberg, M., Koene, B., & Paauwe, J. 2011. Balancing HRM: the psychological contract of employees: A multi-level study. ***Personnel Review***, 40: 664-683.

Sowinski, D., Fortmann, K., & Lezotte, D. 2008. Climate for service and the moderating effects of climate strength on customer satisfaction, voluntary turnover, and profitability. ***European Journal of Work and Organizational Psychology***, 17: 73-88.

Stanton, P., Young, S., Bartram, T., & Leggat, S. 2010. Singing the same song: translating HRM messages across management hierarchies in Australian hospitals. ***The International Journal of Human Resource Management***, 21: 567-581.

Stumpf, S. A., Doh, J. P., & Tymon, W. G. 2010. The strength of HR practices in India and their effects on employee career success, performance, and potential. ***Human resource management***, 49: 353-375.

Thaler, R. H., & Sunstein, C. R. 2008. ***Nudge: improving decisions about health, wealth, and happiness***. New Haven: Yale University Press.

Thaler, R. H., Sunstein, C. R., & Balz, J. P. 2014. Choice architecture. ***The Behavioral Foundations of Public Policy***.

Thibaut, J. W., & Kelley, H. H.1959. ***The social psychology of groups***. Oxford: Wiley & Sons.

Toh, S. M., Morgeson, F. P., & Campion, M. A. 2008. Human resource configurations: investigating fit with the organizational context. ***Journal of Applied Psychology***, 93: 864-882.

Tversky, A., & Kahneman, D. 1981. The framing of decisions and the psychology of choice. ***Science***, 211: 453-458.

Ulrich, D. 1997. ***Human resource champions: The next agenda for adding value to HR practices***. Boston: Harvard Business School Press.

Ulrich, D., Brockbank, W., Johnson, D., Sandholtz, K. & Younger, J. 2008. ***HR competencies: Mastery at the intersection of people and business***. Society for Human Resource Management.

Veld, M., Paauwe, J., & Boselie, P. 2010. HRM and strategic climates in hospitals: does the message come across at the ward level? ***Human Resource Management Journal***, 20: 339-356.

Verbeke, A., & Tung, V. 2013. The future of stakeholder management theory: A temporal perspective. ***Journal of Business Ethics***, 112: 529-543.

Vermeeren, B. 2014. Variability in HRM implementation among line managers and its effect on performance: a 2-1-2 mediational multilevel approach. ***The International Journal of Human Resource Management***, 25: 3039-3059.

Weick, K. E. 1995. ***Sensemaking in organizations***. Thousand Oaks, CA: Sage.

Weick, K. E. 2012. ***Making sense of the organization: Volume 2: The impermanent organization*** (Vol. 2). West Sussex, UK: John Wiley & Sons.

White, M., & Bryson, A. 2013. Positive employee attitudes: How much human resource management do you need? ***Human Relations***, 66: 385-406.

Wright, P. M., & McMahan, G. C. 1992. Theoretical Perspectives for Strategic Human Resource Management. ***Journal of Management***, 18: 295-320.

Wright, P. M., McMahan, G. C., & McWilliams, A. 1994. Human resources and sustained competitive advantage: a resource-based perspective. ***International Journal of Human Resource Management***, 5: 301-326.

Wright, P. M., & Nishii, L. H. 2013. Strategic HRM and organizational behaviour: integrating multiple levels of analysis. In D. Guest, J. Paauwe and P. Wright (Eds), ***Human Resource Management and Performance: Progress and Prospects***: 97-110. Oxford: Wiley-Blackwell.

Zohar, D., & Luria, G. 2004. Climate as a social-cognitive construction of supervisory safety practices: scripts as proxy of behavior patterns. ***Journal of applied psychology***, 89: 322-333.

Zohar, D., & Luria, G. 2010. Group Leaders as Gatekeepers: Testing Safety Climate Variations across Levels of Analysis. ***Applied Psychology***, 59: 647-673.

Cheri Ostroff (Cheri.Ostroff@unisa.edu.au) is a research professor in the School of Management, University of South Australia. She received her Ph.D. from Michigan State University. Her current research interests include multilevel theory, organizational culture and climate, person-environment fit, and human resource management systems.

David E. Bowen (David.E.Bowen@thunderbird.asu.edu) is the G. Robert & Katherine Herberger Chair in Global Management at Thunderbird School of Global Management, Arizona State University. His Ph.D. is from Michigan State University. His current research interests include the mix of employees and technology in creating the customer service experience and service climate strength.