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A Study of the Hierarchical Culture Gaps Within Unionized Utilities Companies

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ABSTRACT

The purpose of this study was to measure the culture gaps between hierarchical subgroups within unionized utilities companies. We conducted a mixed methods study. Using archival survey data, we compared hierarchically-defined subgroups' perceptions of performance-linked culture traits within five unionized utilities companies. We later conducted interviews and focus groups, followed by qualitative coding and analysis. As compared to non-union employees, union employees viewed their companies as substantially *less* involving, consistent, adaptable, and clear about purpose and direction. Our qualitative analysis highlighted two prior management decisions as illustrative of the contrast between high and low levels of union involvement and clarity. Culture scholars and practitioners have suggested that leaders must align subcultures where they exist. Our study demonstrates large culture gaps between union employees and other subgroups and suggests that management's involvement of the workforce in strategic decisions may have unique consequences for how subgroups perceive and interpret the culture.

The topic of labor unions has remained a source of public interest (Hananel, 2012), with vigorous debate around them spreading into the realms of work, politics, and law in the United States (BBC News, 2018b), debate that has potential implications for how employees view their relationship with their employer. Unions are defined as democratic workers' organizations whose mission is to advocate for employees' interests (Stinglhamber, Gillis, Teixeira, & Demoulin, 2013). In the United States, overall union social and economic participation is at a 97-year low (Greenhouse, 2013), as ongoing changes, such as states' passage of Right to Work laws, to the legal and political environment have weakened collective bargaining power. Despite this general decline, a number of industries and occupations remain heavily unionized (e.g., public sector at 35.3%) and the unionized workforce represents a large part of the U.S. middle-class (Bureau of Labor Statistics, 2015).

The primary reasons for forming or joining a union are often economic: for instance, to raise earnings and improve job security (Farber & Saks, 1980). However, many of the surrounding factors may stem from differences in values or beliefs, or from organizational culture, more broadly. In many organizations, unionization is preceded and followed by a labor-management relationship that is highly antagonistic (Buttigieg, Deery, & Iverson, 2007; Klasa, Maxwell, & Ortiz-Molina, 2009; Logan, 2006). U.S. managers have a history of opposing unions either through avoidance (Logan, 2006) or through practices designed to undermine collective bargaining (Klasa et al., 2009). U.S. workers tend to unionize as a result of dissatisfaction and perceived injustices in the workplace (Buttigieg et al., 2007). Though the topic of unions appears less contentious outside the United Sttes, there are nevertheless a number of challenging cases worldwide. A 14-day strike by Air France pilots cost the airline more than 300 million euros (Michelson, 2014), and more recently there was a 3-month-long labor strike by railway workers in France (BBC News, 2018a).

Despite popular and journalistic accounts of these examples often highlighting rifts between management and unions, no studies we are aware of have systematically measured the organizational cultural differences that exist within unionized organizations nor attempted to understand their genesis and consequences. While we do not intend to minimize the economic factors associated with unionization, it is our belief that better understanding perceptual differences around an organization's values, beliefs, and assumptions (i.e., organizational culture) between hierarchical subgroups may shed light around issues experienced in unionized organizations (Schein, 2009).

The present study had two major aims. First, we tested whether there are indeed culture gaps, or differences in

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how the organizational culture is perceived within unionized organizations, and if so, we sought to characterize the degree and nature of those gaps. The foci of our investigation were the potential cultural differences, or gaps between hierarchical subgroups. Second, in line with culture theories, we sought to gain a deeper understanding of the context, specifically, how hierarchical subgroups derive unique interpretations and attributions for the culture. This led us to identify and then codify several historical events as particularly meaningful to the emergence of observed culture gaps. A better understanding of the nature of the differences in organizational cultural perceptions experienced by employees in a unionized company, along with an understanding of why these differences may exist, has the potential to help both management and labor union leadership in determining the source of the issues they may be experiencing.

Organizational culture and culture gaps

Elliot Jacques's (1951) detailed characterization of the informal social structures within the Glacier Metal Company in *The Changing Culture of a Factory* helped to provide an explicit introduction to the concept of organizational culture and preceded significant works by Pettigrew (1979) and Smircich (1983), which launched the disciplined study of organizational culture as an important scholarly domain. Over the last 35 years, scholars have advanced and debated a number of theoretical perspectives and definitions for what makes up an organization's culture (e.g., Denison, 1996). Generally, most scholars now agree that culture is broadly encompassing of the values, beliefs, and assumptions that are held by the members of an organization and that facilitate shared meaning and behavioral norms (Alvesson, 2011; Ashkanasy, Wilderom, & Peterson, 2000; Schein, 1992).

Theory and research also underscore the potential for variation and multiple cultures or subcultures coexisting within single organizations (Hofstede, 1998; Martin, 1992; Martin & Meyerson, 1988; Sackmann, 1992). Schein (2009) described subculture formation as a natural consequence of organizational maturation and growth, as new groups of employees challenge, modify, or replace the dominant or mainstream culture over time. As these subcultures evolve they have the potential to diverge from one another and take on a variety of arrangements. Martin and Siehl (1983) described how subcultures can exist independently of the dominant culture or in a way that is either enhancing or contradictory.

Countercultures, or subcultures that emerge in direct contrast to the dominant norms and values, have received the greatest attention (Martin & Siehl, 1983). This is because countercultures that diverge in significant ways are regarded as a threat to the performance and survival of the organization (Chatman & Cha, 2004; Gordon & DiTomaso, 1992; Hofstede, 1998; Schein, 2009; Van Maanen & Barley, 1985). In contrast, organizations that build a high level of internal alignment around productive norms and values—such as strong involvement of people and intense focus on customers—are seen as having a distinct performance and competitive advantage (Barney, 1986; Chatman & Cha, 2003; Sackmann, 2011). As such, Schein (2009) has described how it is an essential role of leaders to become aware of subcultures, determine where they exist, and bring them into alignment.

Following from these perspectives, we define culture gaps as the degree to which subgroups diverge in their views or perceptions of the organization's culture. Defined as a matter of degree, wider gaps connote greater subgroup disagreement or more extremely divergent perceptions about the cultural norms and values that characterize the organization. In order to measure these gaps in the present study, we first needed to resolve two key questions: (a) Where, internal to unionized organizations, should one look for culture gaps? (b) What cultural content or construct dimensions should be the focus of the investigation? In the sections that follow, we draw on existing research and theory to describe our focus on hierarchical subgroups and performance-linked culture traits.

Hierarchical subgroups

Koene, Boone, and Soeters's (1997) discussion of three primary forces is useful to explain why cultural divergence is likely along hierarchical lines. First, organizational structures around hierarchy create and reinforce shared day-to-day work experiences within different levels of organizations, as well as varying access to formal sources of power, reward, and leadership. Second, social interactionism-the informal social networks and channels that guide how often and under what circumstances people interact—is often nested within the formal hierarchy but can also diverge in important ways. Third, shared demography explains how people tend to form themselves into homogeneous subgroups based on shared personal backgrounds, values, and preferences. The unique attraction, selection, and attrition pressures that exist for managerial (often white-collar) versus nonmanagerial (often blue-collar) occupations further elucidate how demography is likely to reinforce subgrouping of people at different levels of organizations (Schneider, Goldstein, & Smith, 1995).

In combination, the Koene et al. (1997) primary forces are likely to contribute to the cultural norms and values that exist and cohere within hierarchical subgroups, and,

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in so doing, widen the culture gaps that exist between them. Trice and colleagues (e.g., Trice, 1993; Trice & Beyer, 1993; Trice & Morand, 1991) explain how manager subcultures cohere as a result of the demanding and complex pressures that are unique to formal leadership roles, in addition to the social gatherings, development opportunities, and confidential information and power that only managers have access to. Similarly, nonmanager subcultures cohere based on the nature of the work, the social interactions, and the many routines and traditions that bind people together on the front lines of the organization. Adding to these factors, Fortado (1992, 2001) describes how conflict with management and unsatisfactory working conditions often give rise to nonmanager subcultures.

In support of these arguments, a small number of empirical culture studies have reported differences between managers and nonmanagers. For example, Toczyska (1996) found that perceptions of organizational culture were a stronger predictor of manager versus nonmanager status than was age, gender, ethnicity, or worldview. In a study of a large Danish insurance company, Hofstede (1998) found evidence of a professional subculture among managers and specialized staff, which was characterized as more pragmatic, less results oriented, and less employee oriented than the overall culture of the organization.

One clear limitation of existing research is the rather broad categorization of hierarchical subgroups into managers and nonmanagers. Unfortunately, combining managers whose role is strategic leadership with managers whose role is operational supervision overlooks the structural, social, and demographic forces that likely shape the culture of these distinct subgroups in unique ways (Koene et al., 1997). For this reason, we believe it is important to define the hierarchical subgroups in a manner that allows these potential differences to be observed, and have done so in the present study by differentiating supervisors and upper managers, as well as nonsupervisory union and nonunion employees. Specifically, we focused on three hierarchical levels: nonsupervisors (made up of union employees and nonunion employees), supervisors, and upper managers. Almost half of the nonsupervisory sample was part of the union, while no supervisors or upper managers held union membership.

Performance-linked culture traits

Though hierarchical levels can be used to target the potential location of culture gaps inside organizations (i.e., where to look), one must still resolve what to look for. Culture scholars generally agree that the content of organizational culture can be dimensionalized, so that multiple elements can be theorized and measured. However, there remains debate regarding the specific dimensions, labels, and configurations that best represent these elements and also recognition that different models serve different research purposes (Ashkanasy, Broadfoot, & Falkus, 2000).

Unfortunately, dimensionalized models have not been embraced within the subcultures literature. For example, we are aware of no theories specifying which elements of culture specifically are most likely to diverge or converge among hierarchical subgroups. While a limited number of studies have been descriptively helpful, the empirical literature as a whole falls well short of a generalizable knowledge base on which to build more powerful theories. Furthermore, existing studies have used descriptive measures and dimensions, such that the consequences of observed culture differences are unclear for the individuals and organizations studied (e.g., Hofstede, 1998; Toczyska, 1996).

For these reasons, we grounded our research within a prescriptive model and theory that identify several key cultural traits or dimensions that have been linked to organizational performance. These traits represent perceptions of the organization's culture and the respondent's understanding of the how things are done in the organization. In doing so, the measure captures the fundamental beliefs and assumptions of the organization via more visible cultural artifacts (Denison, Nieminen, & Kotrba, 2014).

Differences, or gaps, on these dimensions thus not only would indicate a difference in values but also would imply a difference in belief about the effectiveness of the organizational culture in question. In other words, gaps in culture would suggest a fundamental dissent between groups in what is working well. Denison and Mishra (1995) developed four broad cultural traits, which subsume three indexes each that reflect cultural effectiveness. Rather than working to describe an organization's values, they adopted a performance-oriented approach in developing these dimensions to identify cultural aspects that promote greater organizational effectiveness by first identifying high- and low-performing organizations. Specifically, they describe organizations as most effective when they find ways to engage, develop, and empower their people as individuals and within teams (involvement), facilitate coordinated actions and promote consistency of behaviors through core business values and integrity (consistency), translate the demands of the customer to responsive and anticipatory actions (adaptability), and provide a clear sense of purpose and mission that bridges day-to-day performance objectives with the long-term vision (mission). The subdimensions, or indexes, of these traits are further defined in Table 1 and are measured via the Denison Organizational Culture Survey (DOCS). Denison and Mishra (1995) further explained that by exhibiting greater intensity on each trait, organizations can

 Table 1. Definitions of culture traits and indexes from the DOCS.

Effectiveness traits and corresponding index definitions

- **1. Involvement** concerns the personal engagement of individuals within the organization and reflects a focus on the internal dynamics of the organization and on flexibility.
 - 1.1. Empowerment—Individuals have the authority, initiative, and ability to manage their own work. This creates a sense of ownership and responsibility toward the organization.

1.2. Team orientation—Value is placed on working cooperatively toward common goals for which all employees feel mutually accountable. The organization relies on team effort to get work done. 1.3. Capability development—The organization continually invests in the development of employee's skills in order to stay competitive and meet on-going business needs.

- 2. Consistency refers to shared values, and efficient systems and processes, and reflects an internal and stable focus.
 2.1. Core values—Members of the organization share a set of values that create a sense of identity and a clear set of expectations.
 2.2. Agreement—Members of the organization are able to reach agreement on critical issues. This includes both the underlying level of agreement and the ability to reconcile differences when they occur.
 2.3. Coordination and integration—Different functions and units of the organization are able to work together well to achieve common goals. Organizational boundaries do not interfere with getting work done.
- 3. Adaptability refers to employees' ability to understand what the customer wants, to learn new skills, and to change in response to demand. The focus of adaptability is external and flexible. 3.1. Creating change—The organization is able to create adaptive ways to meet changing needs. It is able to read the business environment, react quickly to current trends, and anticipate future changes. 3.2. Customer focus—The organization understands and reacts to its customers and anticipates their future needs. This reflects the degree to which the organization is driven by a concern to satisfy its customers.

3.3. Organizational learning—The organization receives, translates, and interprets signals from the environment into opportunities for encouraging innovation, gaining knowledge, and developing capabilities.

4. Mission refers to an organization's purpose and direction, and reflects a focus external to the organization and on stability.
4.1. Strategic direction and intent—Clear strategic intentions convey the organization's purpose and make it clear how everyone can contribute and "make their mark" on the industry.
4.2. Goals and objectives—A clear set of goals and objectives can be linked to the mission, vision, and strategy, and can provide everyone with a clear direction in their work.

4.3. Vision—The organization has a shared view of a desired future state. It embodies core values and captures the hearts and minds of the organization's people, while providing guidance and direction.

more effectively balance the dynamic tensions created by internal and external sources of influence and the need for both stability and flexibility (Lawrence & Lorsch, 1967; Quinn & Cameron, 1988).

To further support the prescriptive nature of this model, prior studies investigating these culture dimensions have reported positive linkages with a range of performance outcomes (e.g., Denison et al., 2014), as well as empirical support for the theorized importance of balancing strengths across culture traits (Kotrba et al., 2012; Yilmaz & Ergun, 2008). This prescriptive approach is further bolstered by comprehensive qualitative and quantitative reviews of the culture-performance literature that have found similar support for the direct, positive effects of culture dimensions that focus on collaboration, innovation, and market focus (Hartnell, Ou, & Kinicki, 2011; Sackmann, 2011).

The present study

Despite the important role that unions continue to play worldwide, very few studies have examined the culture of unionized organizations. Descriptive differences between union and nonunion culture have been observed in two studies. Hofstede, Neuijen, Ohayv, and Sanders (1990) compared the cultural work practices among 20 groups from Denmark and the Netherlands. As compared to nonunion employees, union employees reported lower results orientation-valuing the process of work more than the outcome of work-and lower professionalismfinding the organization as a stronger source of personal identity than one's profession or occupation. A second study by Tang, Kim, and O'Donald (2000) found that union workers in automotive plants in the United States perceived the culture to be less family and team oriented and have a less open communication style as compared to nonunion workers in automotive plants in Japan.

Coupled with research on hierarchical subcultures (Fortado, 1992; Toczyska, 1996; Trice, 1993), these findings suggest that culture gaps might be prominent across the hierarchical subgroups of unionized organizations in particular. In other words, the cultural divergence that may be naturally present due to hierarchical subgroup differentiation (Koene et al., 1997) might be further amplified or accelerated by a codifying union presence within one or more of the subgroups. As was true in the present study, many unionized organizations are represented only at the nonmanagerial level. This means that union employees may perceive and experience the culture differently from both their nonunion nonmanagerial colleagues and the layers of management above. Moreover, the studies by Hofstede (1998) and Tang et al. (2000) generally suggest that union employees perceive a less effective or positive culture than other organizational subgroups, as well as lower job satisfaction and less favorable perceptions of work and job characteristics (Artz, 2010; Berger, 1983; Guest & Conway, 2004; Hammer & Avgar, 2005; Meng, 1990). Based on this general pattern, we hypothesized the following:

Hypothesis 1: Within unionized companies, hierarchical subgroups differ in their perceptions of performance-linked culture traits.

Hypothesis 2: The largest difference in perceptions of performance-linked culture traits occurs between union employees and the other hierarchical subgroups, such that the union employees perceive the culture less positively.

Our hypotheses specify culture gaps generically across the performance-linked culture traits theorized

by Denison and Mishra (1995). At the same time, we recognize that the magnitude of observed culture gaps might vary when looking at specific dimensions of culture. We also sought to better understand what contextual factors and historical events might help to account for such differences if they exist. In lieu of previous research and theory to help disentangle these issues, we state the following as exploratory research questions:

Research Question 1: On which performance-linked culture indexes are the perceived differences between hierarchical subgroups greatest in magnitude?

Research Question 2: What contextual factors or events help to account for observed culture gaps between hierarchical subgroups?

Method

Culture scholars have adopted different quantitative and qualitative methodologies following from different philosophical perspectives (for a comprehensive treatment of the philosophical and methodological underpinnings of the organizational culture literature see Denison, 1996). Our approach in the present research is best characterized as pragmatic. The pragmatic worldview focuses on actions, situations, and consequences and is primarily concerned with solutions to problems, rather than adherence to a particular methodology. As such, pragmatism is considered to be the philosophical underpinning for mixed-methods research (Creswell, 2009).

In this study, we used a sequential, mixed-methods design. The study's hypotheses were tested using a quantitative analysis of previously collected archival survey data. A later qualitative analysis of interviews and focus groups allowed us to expand on these findings within a subsample of the companies and hierarchical subgroups. A consistent critique of culture research and quantitative studies in particular is that studies have not sufficiently considered the industry context. With this in mind, we firmly grounded our investigation in a specific industry setting by studying unionized utilities companies.

Quantitative methodology

Sample

Our quantitative analysis focused on previously collected archival survey data. Culture surveys were gathered from five unionized, public utilities companies that provide natural gas and electricity to commercial and residential customers in the United States. At the time of the study, the five companies shared a common parent company, a publicly owned and traded energy group with annual revenues in excess of \$5 billion. Under the parent company's ownership, the five companies maintained semiautonomous branding and management and continued autonomous operations across their distinct geographical service regions. Unfortunately, we were not able to extend our data collection to three additional subsidiaries owned by the same parent company at the time of our study.

In each of the five companies, a census methodology was used with all full-time employees invited to participate. The overall response rate across companies was 49.95%. This was better than the 35.7% mean response rate (SD = 18.8) for organizational surveys that was reported in Baruch and Holtom's (2008) review. Data restrictions precluded the necessary information needed to compute the specific response rates for each company and subgroup. In total, the survey respondents included 599 union employees, 674 nonunion employees, 269 supervisors, and 29 upper managers (n = 1,571). In one of the five companies, which we have labeled Company C, no upper managers were identified as survey respondents. This was the only subgroup not represented in our quantitative analyses across the five companies.

Union employees held a range of skilled and semiskilled nonsupervisory jobs (e.g., electrician and installation). Nonunion employees included nonunionized, nonsupervisory support and administrative staff from the corporate offices and district shops. Supervisors were responsible for the day-to-day supervision of front-line employees in the district shops and in the field. Upper managers included senior leaders of the companies who were responsible for business operations and strategy at the regional and corporate level.

Together, the definition of the four subgroups sheds light on two interrelated factors in the present work context: hierarchy and unionization. Overall, the groups are hierarchically defined by three levels: nonsupervisors, supervisors, and upper managers. Union employees were at the nonsupervisory level, though not all nonsupervisory employees were unionized. In these companies only the nonsupervisory employees who hold skilled or semiskilled trade occupations can join a union. Union employees comprised 47% of the total nonsupervisory employee sample. The inclusion of both union and nonunion employees at the same hierarchical level is an important feature of the study design because this helps to partially disentangle the unique role of hierarchy and union membership within the observed pattern of findings. While a fully crossed, or fully factorial, design would be even more desirable for this purpose, we note in the Limitations section that this was not possible in the present study, given the absence of unionized supervisors and upper managers.

Denison organizational culture survey

We measured perceptions of organizational culture using the Denison Organizational Culture Survey (DOCS; Denison & Neale, 1996). Data were collected using a combination of online and paper surveys. In total, the DOCS includes 60 Likert-type items that use a 5-point response scale ranging from 1 = strongly disagree to 5 = strongly agree. The items measure perceptions along the four aforementioned culture traits, which are further clustered into 12 culture indexes (five items per index). In addition, participants indicated their subgroup membership and company.

Analyses focused on the culture indexes (Table 1). Cronbach's alphas for the indexes ranged from .72 to .87, demonstrating adequate internal consistency reliability. The average correlation among the indexes was .66 and ranged from .50 to .80. See Table 2 for means and standard deviations. Full details regarding scale validity and reliability, such as confirmatory factor analysis and tests of criterion-related validity, were summarized by Denison et al. (2014).

Analytic strategy

We conducted a two-way multivariate analysis of variance (MANOVA) using subgroup and company as predictors and the 12 aforementioned culture indexes as dependent variables. Company was included in the model to test whether the presence and nature of the hypothesized subgroup culture gaps varied by company. A nonsignificant company by subgroup interaction would suggest that any subgroup differences were not due to the company in question, while a significant main effect of subgroup would suggest subgroup differences, or a culture gap, across hierarchical levels on the cultural indexes.

Qualitative methodology

The qualitative analysis included representatives from two of the five utilities companies (Company C and Company D), and in each case, three of the four subgroups. In total, 24 union employees, 12 supervisors, and seven upper managers participated. Thirty-nine of the participants were male, and four were female. Age ranges, in years, were as follows: 20-29 (n = 1), 30-39 (n = 3), 40-49 (n = 16), 50-59 (n = 13), and 60-69 (n = 1); nine did not report their age range. The average tenure within the subsample was 21.9 years (SD = 8.87). The shortcomings of using a convenience sample and our inability to capture nonunion employees in the qualitative analysis are further discussed in the Limitations section.

Qualitative data was collected approximately 2 years following the collection of the archival survey data on which the quantitative analyses are based. Seven 60minute phone interviews were conducted individually with upper managers. Additionally, a total of seven 90minute focus groups were conducted, five with union employees and two with supervisors. Each focus group had between 2 and 10 participants. Interviews and focus groups were facilitated by the study's primary author using a semistructured protocol. A second researcher attended all data-gathering sessions to take notes.

All sessions began by assuring the confidentiality of study participants. The culture model was introduced, and the 12 culture indexes were defined. Next, study participants were asked to select an area within the model that represented a particularly difficult or challenging issue for their company. The facilitator would then probe deeper into the focus area by asking a series of questions to, first, ascertain real examples that illustrate the cultural challenge, and second, gain a deeper understanding of participants' interpretation and causal attributions for the cultural challenge described. This

Table 2. Descriptive st	tatistics for subgroups	on culture indexes.

	Union employees	Nonunion employees	Supervisors	Upper managers	Overall
Culture indexes	$\frac{\text{cmployees}}{M(SD)}$	M (SD)	$\frac{Supervisors}{M(SD)}$	M (SD)	M (SD)
Empowerment	3.02 (0.83)	3.38 (0.07)	3.46 (0.07)	3.73 (0.16)	3.28 (0.81)
Team orientation	3.06 (0.11)	3.36 (0.07)	3.50 (0.08)	3.88 (0.17)	3.30 (0.87)
Capability development	3.03 (0.10)	3.32 (0.06)	3.35 (0.07)	3.62 (0.15)	3.20 (0.76)
Core values	3.22 (0.09)	3.62 (0.06)	3.79 (0.06)	4.14 (0.14)	3.49 (0.72)
Agreement	2.89 (0.09)	3.28 (0.06)	3.30 (0.07)	3.55 (0.15)	3.13 (0.73)
Coordination and integration	2.88 (0.10)	3.05 (0.06)	3.07 (0.07)	3.37 (0.15)	2.95 (0.75)
Creating change	2.76 (0.09)	3.16 (0.06)	3.01 (0.06)	3.30 (0.14)	2.96 (0.69)
Customer focus	3.02 (0.09)	3.34 (0.06)	3.45 (0.06)	3.61 (0.14)	3.25 (0.71)
Organizational learning	2.82 (0.09)	3.24 (0.06)	3.16 (0.07)	3.37 (0.15)	3.04 (0.75)
Strategic direction and intent	2.97 (0.10)	3.32 (0.07)	3.35 (0.07)	3.71 (0.17)	3.18 (0.83)
Goals and objectives	2.99 (0.09)	3.47 (0.06)	3.49 (0.07)	3.77 (0.15)	3.24 (0.77)
Vision	2.67 (0.09)	3.08 (0.06)	3.07 (0.07)	3.41 (0.15)	2.92 (0.73)

* p < .05.

process of identifying and probing deeper into focus areas was repeated three to four times per session. Each session also addressed one or more positive culture examples in the same manner by asking about cultural strengths.

All steps of the data coding and analysis were completed by the same researchers who conducted the data collection. First, the detailed notes gathered from all sessions were entered into a database and assigned codes for subgroup and study participant. Notes were then organized into smaller units representing single, coherent comments. Comments were then assigned a code indicating their thematic content and valence, positive or negative, whenever applicable matching the comment to one of the 12 culture indexes from the Denison model. Two additional codes were established for a small number of comments that generically referred to trust and communication. Coding was done independently by the two researchers at first, with any differences resolved through consensus discussion. This process resulted in a total of 696 analyzable comments, including 372 from union employees, 140 from supervisors, and 184 from upper managers.

Results

Hypothesis testing

We conducted a two-way multivariate analysis of variance (MANOVA) using subgroup and company as predictors and the 12 aforementioned culture indexes as dependent variables. Companies differed on average in their overall ratings of company culture (Pillai's Trace = .05, F(48, 5904) = 1.44, p < .05). However, it was not the case that the subgroup ratings varied systematically by company, as evidenced by a nonsignificant subgroup by company

interaction (Pillai's Trace = .09, F(132, 16,313) = 1.01, p = .44), indicating meaningful culture gaps across subgroups.

Hypothesis 1 predicted subgroup differences in perceptions of culture. This hypothesis was confirmed, as subgroup was significant in the omnibus MANOVA (Pillai's Trace = .06, F(36, 4425) = 2.35, p < .001). Hypothesis 2 predicted that the largest gaps would occur between union employees and the other subgroups, such that union employees perceive the culture less positively. The means and Tukey's post hoc tests for the culture indexes (Tables 2 and 3) provide support for this hypothesis. Table 2 shows that in all cases, union employees provided the least positive ratings of culture. The first three columns of Table 3 show that these differences are statistically significant in all cases. In contrast, nonunion employees, supervisors, and upper managers generally do not differ in their perceptions of culture, with just a few exceptions. Nonunion employees have significantly less positive ratings of core values and strategic direction and intent as compared to upper managers, as well as significantly less positive ratings of core values as compared to supervisors.

Our first research question sought to further elaborate the nature of the subgroup gaps at the level of the culture indexes. To explore this question, we examined the univariate between-subjects tests of the MANOVA (Table 4), in addition to the aforementioned Tukey's post hoc tests. As with the omnibus MANOVA, we first examined the subgroup by company interactions. Only two of the twelve interaction terms were significant, corresponding to the core values and goals and objectives models. As displayed in Figure 1, two variations from the general pattern are noteworthy. First, for both indexes, Company D exhibited a less dramatic gap between union employees and nonunion employees, as well as a shallower slope across the subgroups,

Table 3. Mean differences for Tukey's post hoc tests comparing subgroups.

	Subgroup comparisons							
	Union employees	Union	Union	Nonunion employees	Nonunion employees	Supervisors		
	vs. nonunion	employees vs.	employees vs.	vs.	vs.	vs. upper		
Culture index	employees	supervisors	upper managers	supervisors	upper managers	managers		
Empowerment	.38*	.48*	.71*	.10	.33	.22		
Team orientation	.47*	.58*	.82*	.10	.35	.24		
Capability development	.28*	.40*	.53*	.12	.25	.13		
Core values	.48*	.65*	.91*	.18*	.44*	.26		
Agreement	.35*	.44*	.61*	.09	.20	.17		
Coordination and integration	.25*	.24*	.52*	.01	.26	.27		
Creating change	.29*	.29*	.47*	.00	.18	.18		
Customer focus	.36*	.47*	.57*	.10	.20	.10		
Organizational learning	.36*	.37*	.54*	.02	.18	.16		
Strategic direction and intent	.38*	.46*	.79*	.08	.41*	.33		
Goals and objectives	.47*	.55*	.81*	.08	.35	.26		
Vision	.38*	.39*	.67*	.01	.29	.28		

*p < .05.

Culture index	Source	F (df _B , df _W) p Value		Partial η^2	
Empowerment	Subgroup	5.19 (3, 1484)	.001*	.010	
	Company	3.44 (4, 1484)	.010*	.009	
	Subgroup \times company	1.44 (11, 1484)	.148	.011	
Team orientation	Subgroup	5.19 (3, 1484)	.001*	.010	
	Company	5.28 (4, 1484)	<.001*	.014	
	Subgroup \times company	1.22 (11, 1484)	.266	.009	
Capability development	Subgroup	3.74 (3, 1484)	.011*	.008	
	Company	3.49 (4, 1484)	.008*	.009	
	Subgroup \times company	0.96 (11, 1484)	.478	.007	
Core values	Subgroup	13.13 (3, 1484)	<.001*	.026	
	Company	2.84 (4, 1484)	.023*	.008	
	Subgroup \times company	2.22 (11, 1484)	.012*	.016	
Agreement	Subgroup	6.14 (3, 1484)	<.001*	.012	
	Company	1.64 (4, 1484)	.162	.004	
	Subgroup \times company	1.17 (11, 1484)	.305	.009	
Coordination and integration	Subgroup	2.18 (3, 1484)	.089	.004	
	Company	1.44 (4, 1484)	.218	.004	
	Subgroup \times company	1.07 (11, 1484)	.387	.008	
Creating change	Subgroup	5.41 (3, 1484)	.001*	.011	
	Company	3.22 (4, 1484)	.012*	.009	
	Subgroup \times company	1.65 (11, 1484)	.079	.012	
Customer focus	Subgroup	5.88 (3, 1484)	<.001*	.012	
	Company	3.29 (4, 1484)	.011*	.009	
	Subgroup \times company	1.26 (11, 1484)	.244	.009	
Organizational learning	Subgroup	5.13 (3, 1484)	.002*	.010	
	Company	1.48 (4, 1484)	.206	.004	
	Subgroup \times company	1.57 (11, 1484)	.103	.011	
Strategic direction and intent	Subgroup	4.82 (3, 1484)	.002*	.010	
strategie anection and intent	Company	1.07 (4, 1484)	.369	.003	
	Subgroup \times company	1.37 (11, 1484)	.183	.010	
Goals and objectives	Subgroup	8.50 (3, 1484)	<.001*	.017	
couls and objectives	Company	1.029 (4, 1484)	.391	.003	
	Subgroup \times company	1.84 (11, 1484)	.043*	.013	
Vision	Subgroup	6.91 (3, 1484)	<.001*	.013	
	Company	1.63 (4, 1484)	.164	.003	
	Subgroup \times company	1.29 (11, 1484)	.227	.005	

Note. df_B = degrees of freedom between groups; df_W = degrees of freedom error. * p < .05.

generally. Second, for the goals and objectives index, Company C showed a unique pattern, where the nonunion employee ratings were more positive than the supervisor ratings.

Interestingly, core values and goals and objectives also demonstrated the largest subgroup effect among the 12 univariate tests, with partial η^2 values of .026 and .017, respectively, followed by vision (.014), agreement (.012), and customer focus (.012). In contrast, the smallest and only nonsignificant subgroup effect was observed for coordination and integration ($\eta^2 = .004$, p = .089). The specific subgroup comparisons shown in Table 3 are mainly consistent with the univariate results. The largest mean differences when comparing the union employees to the other subgroups were consistently observed for core values, goals and objectives, and team orientation.

Qualitative analysis

Table 5 compares the frequency of comments coded along each of the culture index themes. In total, 79% of the comments had a negative valence, reflecting a cultural challenge, problem, or frustration expressed by a participant (union employees = 83.3%, supervisors = 80.7%, upper managers = 69.6%). Consistent with the quantitative findings, core values was the most frequent cultural challenge described, ranking first among upper managers and supervisors and third among union employees. The second most frequent challenge was empowerment, ranking first among supervisors and second among union employees and upper managers.

A few noteworthy differences were also observed. Although approximately 10% of the negative comments by union employees and supervisors focused on goals and objectives, this was not a challenge discussed with any frequency by upper managers. In contrast, 9% of negative comments by upper managers referenced challenges in creating change, whereas no union employees expressed this concern. Similarly, more than 10% of negative comments by supervisors and upper managers focused on how conflict gets resolved (i.e., agreement), whereas this was the focus of only 2% of comments by union employees.

The subgroup pattern was somewhat more consistent in the case of the positive comments. Empowerment and team orientation ranked in the top three for all three subgroups, in addition to capability development for

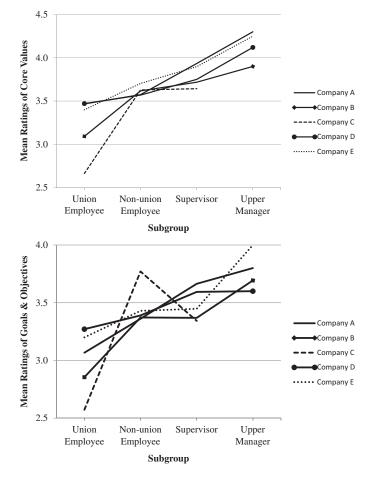


Figure 1. Plots of the significant subgroup \times company interactions for core values (top) and goals and objectives (bottom).

Culture themes	Union employees		Supervisors		Upper managers		Overall	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Empowerment	.15	.16	.22	.16	.16	.13	.17	.15
Team orientation	.21	_	.22	.04	.34	_	.26	.02
Capability development	.05	.17	.33	.09	.11	.09	.12	.13
Core values	.32	.15	.07	.16	.07	.23	.18	.17
Agreement	.03	.02	_	.10	.07	.13	.04	.06
Coordination and integration	.03	.10	_	.12	.02	.05	.02	.10
Creating change	.03	_	.11	.06	.04	.09	.05	.04
Customer focus	_	.08	.04	.04	.05	_	.06	.06
Organizational learning	_	.05	_	_	_	_	.00	.03
Strategic direction and intent	_	.06	_	.04	.05	.06	.02	.06
Goals and objectives	.06	.10	_	.09	.02	_	.03	.08
Vision	.02	.03	_	.09	.04	.05	.02	.05
Communication ^a	.03	—	_	_	.02	.03	.02	.02
Trust ^a	_	.03	_	_	.02	.05	.01	.03

Table 5. Frequency of comments by culture theme, subgroup,), and valence.	
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Note. Frequencies shown are percentages in decimals, computed based on the following subtotals of comments by column: union employees positive (62), union employees negative (310), supervisors positive (27), supervisors negative (113), upper managers positive (56), upper managers negative (128), overall positive (145), and overall negative (551). Pos., positive; Neg., negative.

^aComments that were related generically to communication and trust were coded into separate themes.

supervisors and upper managers. One clear exception was core values, in which nearly one-third of union employees' positive comments referenced the company values, versus fewer than 10% of supervisors' and upper managers' comments.

Discussion

Our findings build upon the existing subculture and union culture literatures in several important ways. For one, our results showed clearly that the most significant culture gaps occurred across union and nonunion lines. Union employees diverged from the other subgroups, including the nonunion rank-and-file comparison group, by consistently perceiving the culture less positively overall. Examining the full pattern of results suggests that the ways in which the union perceived cultural differences was quite broad, with culture gaps observed across each of the cultural elements or traits theorized by Denison and Mishra (1995) as foundational to organizational effectiveness. A closer examination suggests that the largest culture gaps were observed in how union employees perceived less adherence to company values, less clarity and alignment about the goals, and less emphasis on the effective use of teams.

By comparison, only a few significant differences were observed in how the nonunion employees, supervisors, and managers perceived their companies' cultures. The lack of gaps among these subgroups differs from what previous studies have found (e.g., Fortado, 1992, 2001; Hofstede, 1998; Trice, 1993) and might suggest a few possibilities for future studies to test regarding the unique cultural impact of unions and their interaction with the culture gaps between hierarchical levels. From one perspective, the presence of a union might amplify hierarchical culture gaps by adding structural reinforcement of the distinction between employees and managers. Conversely, it is interesting to speculate based on our findings on whether the presence of a union might serve to codify a more coherent and inclusive in-group mentality across the several layers of management and nonunion personnel than might otherwise exist if the union were not present. Future studies could test these possibilities by systematically comparing hierarchical culture gaps across unionized and nonunionized companies from various industries.

The potential consequences of these culture gaps are of utmost importance, including how they translate to the level of performance the organizations achieve. Because prior studies have found the culture traits to positively relate to a wide range of performance criteria such as sales growth, profitability, innovation, and customer satisfaction (Denison & Mishra, 1995; Denison et al., 2014; Gillespie, Denison, Haaland, Smerek, & Neale, 2008; Kotrba et al., 2012), it is perhaps reasonable to expect that widening culture gaps have a negative impact on organizational effectiveness. This is why Schein (2009) suggested that leaders must create alignment across the subcultures that exist within organizations, and from this perspective, research can play an important role by shedding light on the factors that contribute to widening or narrowing gaps.

Toward this end, our qualitative analysis provided several important layers of insight, which we elaborate

in the next section. We first comment briefly on how this added layer of context makes implausible two possible interpretations of our quantitative findings: (a) that union employees are responsible, or solely responsible, for the culture gaps they perceive, and (b) that similar culture ratings preclude underlying differences in cultural attributions and sense-making. Instead, our qualitative analysis reveals a picture that is much more complex. For example, as the pattern of findings for core values and team orientation suggests, some of the most challenging aspects of the culture can also represent deep sources of pride. Likewise, what is viewed as a top challenge by one group—for example, union employees' perception of goals and objectives—may hold less salience for another (e.g., upper managers).

In our analysis of the qualitative data, we also observed that the same events held very different cultural meanings for the members of the subgroups. We noted that many of the comments by study participants could be traced back to two historical events in particular, both of which were viewed and characterized as meaningful touchstones for understanding the culture. As we subsequently describe, these two events help to set a sharp contrast in how strategic decisions by the upper managers achieved varying levels of involvement and clarity.

Event 1: Freeze customer rates

Approximately 4 years prior to this study, Company C made a commitment to "freeze" customer rates. U.S. public utilities companies set the rates that customers pay by filing a rate case with one or more regulatory bodies. As a result of this freeze, the company would experience increasing pressures to lower costs in order to remain profitable. A series of decisions was then necessary about how and where to cut costs, and some of the decisions were negotiated with the union. One such decision involved a significant revision to the employee pension plan. After a difficult negotiation process, management ultimately conceded to a reduction in the pensions of all nonunion personnel, while the union was able to protect its members from a similar reduction. Over time, this was seen as contributing to a number of cultural challenges related to capability development, coordination and integration, and customer focus.

We first highlight how the fallout of the rate freeze is related to consequences regarding capability development. As mentioned earlier, upper management was forced to cut costs internally to make up for the loss of profits that could be gained from increasing customer rates. Accordingly, it cut pensions for the supervisor subgroup. As a result of this loss of pension, union employees were no longer motivated

to seek promotion to the role of supervisor because doing so would result in a loss of pension. Without a desirable promotion opportunity in view, many union employees reported low motivation to improve their job performance and develop their skills in preparation for career advancement. Some of the supervisors who did accept a promotion later expressed regret about their decision. To fill these supervisory roles, the company increasingly turned to external hires. This was an acute source of frustration for union employees in particular, who described the limited experience and technical skills of new supervisors as causing a lack of respect and increased conflict in the workplace. Supervisors and upper managers also acknowledged this as a problem, but mainly from a succession planning perspective.

The company also increased its reliance on contractors to ameliorate the monetary constraints incurred by the rate freeze. Upper managers and supervisors described a strong challenge from the union and also viewed this as creating a number of coordination challenges. Interestingly, union employees expressed mixed reactions, generally recognizing the need to reduce their own workload while also sharing management's concern over the quality of work done by the outside contractors.

Another series of decisions made as a consequence of the rate freeze compromised customer service. For example, by standardizing the meter parts and specifications, the time and costs associated with custom manufacturing and installation were greatly reduced. However, the quality of the work suffered as a result. The premade meters did not allow the technicians to hide their placement behind shrubs or other visual barriers as they had in the past. As a result, union employees and supervisors in the field faced more frequent complaints from customers and had less flexibility to respond to them. The premade meters also removed a strong point of pride for technicians because the skill and creativity that were previously needed to perform the job were no longer required.

A final cost-cutting decision made as an outcome of the rate freeze outsourced the call center to an agency that was not local to the service region. This decision had an impact on both the customer focus culture index and the coordination and integration index. Outsourcing the call center made it difficult to coordinate the response to customers' needs and inquiries. As a result, union employees' and supervisors' interactions with the customers were marked by increasing conflict. Several examples were described in which the technicians' first interaction with the customer involved hearing and responding to complaints about the call center.

Event 2: New safety program

A second major event involved the creation of a new worker safety program by Company D. Union employees were involved in all aspects of designing and implementing the program, including (a) the formation of a union-led steering committee alongside upper management, (b) the union's active role in carrying out safety trainings and peer observations and coaching, (c) the rotation of a dedicated safety officer role among union employees, and (d) weekly employee-led safety meetings. Unlike prior attempts to involve the union, employees were clear about the purpose of their involvement and believed their feedback was genuinely heard and acted on. As such, they used the safety program to illustrate a rare, positive example of empowerment and highlighted the new opportunities this created for the union's collaboration with upper management.

Interestingly, the supervisors described the safety program from a different perspective, detailing their corresponding loss of power and the decline of "hard work" values. They described how "the pendulum" had swung too far in the direction of safety, noting how this created an obstacle for disciplining employees for poor performance. Once a safety concern was raised by an employee, whether seen as legitimate or as an obstruction tactic, many supervisors simply acquiesced out of fear that the employee would file a grievance. In contrast, managers viewed the supervisors as change resistant and eventually sent a directive indicating that safety observations were to be respected by supervisors and handled as off-duty, regular work assignments.

Although many union employees characterized the safety program as a positive shift away from the traditionally punitive stance of management, others viewed it as simply a new mode for disciplinary action. In justification of this view, participants repeatedly mentioned the company's 3- to 5-year retention policy on personnel records. The policy was a consistent point of contention with the union, described as several years longer than other utilities companies in the area, and was seen as a way for management to strengthen its case when disciplining or firing employees. Several participants explained that this was management's way of instilling fear among employees.

Contrasting levels of involvement and clarity

The decision to freeze customer rates by Company C was made by upper managers without strong involvement of either supervisors or union employees. It is interesting to consider whether it might have been

possible to engage a committee to explore options, discuss consequences, or solicit input about how to best communicate with the workforce on this issue. While it is unlikely that these steps would have altered the decision or made it more "popular" because of the various difficult cost-cutting implications—perhaps taking these steps would have earned some level of clarity and support. Instead, union employees did not understand the circumstances or basis of the decision, while they experienced a wide range of negative consequences in their day-to-day work. Supervisors described their tenuous position of needing to communicate management's vision to a frustrated workforce without themselves feeling fully informed or involved.

One of the unfortunate consequences that study participants described was their increasingly contentious and ineffective interactions with customers. Though the decision to freeze rates offered an important benefit to customers (i.e., lower utility costs), there was little evidence of the workforce communicating this benefit or otherwise demonstrating their support for the company's decision as part of their routine interaction with customers. Instead, the emphasis was on empathy for customer complaints. As one union employee described, alluding to the decision to outsource the call center function, "Customers shouldn't have to deal with a phone center that doesn't know the business."

From a management perspective, this example illustrates a failure to gain strategic alignment and, perhaps, an opportunity that was missed as a result. Though upper managers and supervisors consistently described the importance of employees understanding and supporting strategic decisions, a number of barriers were described. The comments shown next illustrate management's beliefs about employees' ability to understand (1), and their level of interest (2), the need to avoid conflict (3), and management's inability to communicate effectively (4).

- (1) "They wouldn't understand it [why there are cuts]. I know they wouldn't. For example, when we are going through a rate case and the company is looking for a number—the union doesn't understand how that plays in the organization. All they see is millions of dollars that the company is making and don't see why they should have to take a cut—not the same knowledge base."
- (2) "I don't think the union cares about the mission. They just want to know what their job is on a daily basis."

- (3) "If something happens, and if management doesn't explain everything, union management will react negatively."
- (4) "We tried to simplify it down for great understanding, but at the end of the day when you try to explain how and why you need to do things, it's not easily understood. For example, managers would sit down with the employees ... including nonunion employees ... in large meetings with the shops which were supposed to be carried down to the supervisors. As the message goes down, it gets diluted."

Counter to management's beliefs about limited interest, union employees consistently expressed a desire to know more about strategic goals and decisions, in addition to wanting greater clarity on day-to-day issues such as workflow, scheduling, and supervisor expectations. Unfortunately, we did not have the opportunity to observe either party's ability in these interactions.

In contrast to this first event, the launch of the new safety program by Company D was successful in involving employees in all stages of the decision and in achieving a greater level of clarity about what the company was attempting to do and why. As such, the safety program was generally perceived favorably and frequently used to exemplify positive cultural elements, such as empowerment and collaboration.

At the same time, it was interesting to note how the implementation of the program faced old cultural barriers and also became the source of new conflicts. For example, the gains in empowerment among union employees were experienced as a loss of power among supervisors, and eventually, safety was experienced as a new arena for disciplinary action from the union employee perspective and an impediment to performance management from the supervisor perspective. This once again underscores the multiplicity of cultural perceptions, interpretations, and attributions, even when in reference to the same organizational event.

Reflecting on these cultural artifacts, it is possible to speculate that each strategic decision or change in organizations has a cascading impact on the culture that both is difficult to see and might carry a blend of intended and unintended consequences that will differ between people and subgroups. It is also important to remember that these decisions and changes do not emerge from a vacuum but rather are informed and shaped by the old norms and expectations. From a culture perspective, this draws to mind the metaphor of an underwater geyser. The way the geyser emerges and eventually reaches the surface is influenced and in some ways constrained by the surrounding water and ecosystem. At the surface, the geyser creates a ripple effect with near and distant implications for the continued evolution of the ecosystem. And throughout this evolution, the new features that are created interact with the old features that persist. We observed this quite clearly in the form of resistance to changing the old beliefs and attitudes about the "impossibility of collaborating with the union" despite new modes of collaboration that were emerging.

Limitations

We acknowledge several limitations of the present research. First, we recognize that our use of a crosssectional design limits our ability to identify with confidence the processes that resulted in the culture gaps. Moreover, participants' memory and recall of the historical events described are subject to inaccuracy and bias. We attempted to mitigate these possibilities whenever possible by asking study participants for specific examples and by focusing our analysis and description on the most salient and frequent themes and examples that were provided. Future studies could use similar methods collected over multiple time points and also incorporate new methods, such as diaries or archival analysis, to more deeply elucidate the dynamics of hierarchical culture gaps. A related limitation was the lack of performance measures or other possible individual and organizational outcomes of culture gaps. As previously noted, future studies could offer new insights by more explicitly testing the relationship between culture gaps and criterion measures over time.

Second, there were a few noteworthy limitations of our study sample. In our quantitative analysis, the uneven distribution of employees across the subgroups and companies, including one company in which we could not identify upper managers, led to unequal cell sizes, which can be a detriment to statistical power within the analysis of variance (ANOVA) framework. Similarly, a fully crossed research design, with union and nonunion representation at each hierarchical level, would provide a stronger basis for disentangling the effects of hierarchy and union membership. However, we note that both of these features-equal cell sizes and fully crossed designmay be difficult to achieve when studying real organizational settings. Most notably, in the present study there were no union members among the supervisor and upper manager subgroups. The possibility of unionized employees among supervisor or manager subgroups in other companies should be considered in future research: Subgroup differences, or the lack thereof, in these situations would help better identify the extent to which perceptions of cultural differences are due to unionization or hierarchical level.

Our study is also limited by the use of a convenience sample. In our qualitative analysis in particular, our access was limited to a smaller subsample of the companies and subgroups from the archival analysis. An improved design for a future study would entail using a fully matched sample across the two components, thereby allowing for stronger triangulation and complementarity (Greene, Caracelli, & Graham, 1989; Yauch & Steudel, 2003). From a similar perspective, it would have been advantageous to have a shorter temporal distance between the collection of the survey data and the qualitative data. Though we do not believe this compromised our ability to illustrate some of the important historical context and events "underneath" the measured culture perceptions, we nevertheless remind readers to be cautious against overgeneralizing from the stories and examples provided.

Cautions regarding generalizability are also warranted based on our study's focus within a single industry (i.e., utilities), which operates within a mainly unionized and blue-collar environment and has specific forms of federal regulation and oversight. Though our decision to focus within a specific context was intentional and, we believe, allowed us to make richer and more contextualized observations, it will be important for future studies to compare culture gaps across different industry and organizational settings, including private-sector companies with a higher proportion of professionalized occupations and job types. In addition, we believe it will be of particular interest to select a range of companies for more systematic comparisons on the basis of the types and degrees of culture gaps that are observed using surveys or other screening methods.

Conclusion

This study demonstrated culture gaps between union employees and other hierarchical subgroups along a number of performance-linked culture traits. The findings illustrated how these subgroups perceived strong differences in the degree to which the culture is empowering of its people, sets a clear and compelling mission, aligns people around a common set of values, and focuses on the customer. Our qualitative analysis further demonstrated how the subgroups differed in their interpretation of the culture and their experience of a unique set of challenges attributed to common events. By contrasting participants' description of two key management decisions from the past—one described as having mainly negative consequences and the other described as mainly positive—we surfaced important differences in how the union employees were involved in the decisions and the level of clarity that was achieved.

Disclosure statement

No potential conflict of interest was reported by the authors.

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