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Paradigm lost: Reinvigorating the study of organizational culture☆

Jennifer A. Chatman[a,*], Charles A. O'Reilly[b]

[a] Haas School of Business, University of California, Berkeley, United States
[b] Graduate School of Business, Stanford University, United States

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ABSTRACT

In spite of the importance of organizational culture, scholarly advances in our understanding of the construct appear to have stagnated. We review the state of culture research and argue that the ongoing academic debates about what culture is and how to study it have resulted in a lack of unity and precision in defining and measuring culture. This ambiguity has constrained progress in both developing a coherent theory of organizational culture and accreting replicable and valid findings. To make progress we argue that future research should focus on conceptualizing and assessing organizational culture as the norms that characterize a group or organization that if widely shared and strongly held, act as a social control system to shape members' attitudes and behaviors. We further argue that to accomplish this, researchers need to recognize that norms can be parsed into three distinct dimensions: (1) the *content* or what is deemed important (e.g., teamwork, accountability, innovation), (2) the *consensus* or how widely shared norms are held across people, and (3) the *intensity* of feelings about the importance of the norm (e.g., are people willing to sanction others). From this perspective we suggest how future research might be able to clarify some of the current conflicts and confusion that characterize the current state of the field.

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* Corresponding author.
E-mail addresses: chatman@haas.berkeley.edu (J.A. Chatman), coreilly@stanford.edu (C.A. O'Reilly).

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Organizational researchers have been interested in the role of culture in organizational life and by some estimates have generated more than 4600 articles on the topic (Hartnell, Ou, & Kinicki, 2011). Managers have also recognized the importance of culture because of the presumed relationship between certain types of organizational cultures and effective organizational performance (e.g., Alvesson & Sveningsson, 2015; Katzenbach, Steffen, & Kronley, 2012; Lorsch & McTague, 2016). In fact, a recent survey showed that 78% of *Fortune* 1000 CEO's and CFO's view culture as one of the top three factors affecting their firm's value (Graham, Harvey, Popadak, & Rajgopal, 2016). Despite both academic and practitioner interest, however, we lack a unified approach to understanding organizational culture, one that identifies the sources of cultural variation in groups and organizations, its psychological basis, and the impact it has on people and organizations. We suggest that this gap in theoretical clarity has arisen for two reasons. First, managerial interest in organizational culture has generated lucrative consulting opportunities that may have stunted attempts in the academic arena to develop a precise, comprehensive, and robust theory of organizational culture. Second, debates about how to define and study culture have ceased to be generative and instead, are constraining our ability to accumulate and advance an integrative and comprehensive theory of culture.

Twenty years after our first chapter on organizational culture appeared in this series (O'Reilly & Chatman, 1996), we take stock of the organizational culture research domain. We begin by offering a brief history of the evolution of organizational culture as a research area. We then consider the impact that an early interest among practicing managers has had on the evolution of the culture construct. We review theoretical and empirical models of culture and the most salient debates, including distinctions between culture and organizational climate, whether culture is appropriately studied qualitatively or quantitatively, and how culture is measured. We argue that ongoing debates that are no longer fruitful be retired so that theoretical progress can resume. We also suggest that prior work has often been ill suited to isolate and measure culture precisely, leading to a widespread lack of construct validity. We recommend that culture be defined in terms of its underlying psychological mechanism, which we identify as social norms that operate through informational and normative social influence. Then, to advance a theory of organizational culture, we parse three components of organizational culture: norm content, norm consensus, and norm intensity, and argue that prior research has confounded these components and clouded our understanding of how culture works, particularly the relationship between culture and organizational performance. Armed with a robust theory of the mechanisms underlying culture and linking it to individual and organizational behavior, we identify several promising future directions for the domain; some of which involve connecting with adjacent fields, and others that benefit from advances in computing capabilities enabling us to consider larger samples and more dynamic analytical approaches to assessing culture and its impact on people and organizations. Our chapter, thus, aspires to reinvigorate an academic focus on organizational culture, one that identifies and unlocks key mechanisms, antecedents, and consequences.

1. A brief history of the early focus on organizational culture

In the late 1970s and early 1980s managers and scholars became interested in the topic of "organizational culture." A series of poplar books (e.g., Davis, 1984; Deal & Kennedy, 1982), academic conferences, and special issues of scholarly journals (*Administrative Science Quarterly*, 1979, 1983; *Journal of Management*, 1985; *Journal of Management Studies*, 1982) highlighted the promise of organizational culture as a way to understand how people within organizations interact and how organizations operate to achieve their stated and unstated goals.

We trace the study of organizational culture back to a pioneering paper by Andrew Pettigrew in 1979, published in *Administrative Science Quarterly*. Cultural anthropologists had already developed a productive paradigm, typically derived from case studies devoted to understanding norms and beliefs within different

cultures (e.g., Malinowski, 1944; White, 1949). Pettigrew (1979) applied these ideas to an organizational context and focused on people as creators and managers of meaning. He viewed culture as relevant to the field of organizational behavior because it focused on "how purpose, commitment and order are created in the early life of an organization" (p. 572). He defined culture as a "system of publically and collectively accepted meanings operating for a given group at a given time" (p. 574) and viewed culture as a means for cultivating commitment among members, particularly within new organizations.

Some of the early interest in organizational culture was fueled, in part, by Japan's economic success (e.g., Abegglen & Stalk, 1985; Cole, 1980; Ohmae, 1982). Japan's economic performance when compared to the United States was striking, and it motivated researchers to examine Japanese management practices as a potential source of their national economic performance (e.g., Ouchi, 1981; Pascale & Athos, 1981). For example, Lincoln and Kalleberg (1985) conducted a comparative study of Japanese and American firms and noted that Japanese work structures and culture evoked feelings of community and pride (p. 740). " . . . [I]t now appears that Japanese work structures are the cutting edge of an evolving administrative rationality" (p. 756) and that "the greater commitment of the Japanese workforce is attributable to Japanese management practices and organizational structure" (p. 757). Researchers also pointed to Japanese corporations' extensive use of long-term employment, social and recreational programs, symbols and rituals, and socialization and training which increased employees' involvement in the firm and integrated employees into a tight network (Abegglen, 1958; Dore, 1973; Marsh & Mannari, 1977; Rohlen, 1974). These practices created what was termed a "strong culture." It was also around this time that the study of culture provoked interest not just among academics but among managers as well. This early emphasis on managerial implications of culture had an unintended consequence on the academic study of culture, which we discuss below.

2. The downside of culture as a popular management fad

As academics became increasingly interested in how culture affected behavior in organizations, managers also began to clamor for guidance in how to "manage" culture. As a result, academics and quasi-academics began writing best-selling books that advised managers about the qualities they should develop in their organizations and people so that they could benefit from their organizational culture (e.g., Davis, 1984). Authors quickly followed the interest in Japanese management effectiveness by identifying U.S. firms with similar management practices. In *Theory Z* (1981), for example, Bill Ouchi described how some American companies also emphasized long-term employment and employee loyalty to develop clan-like organizational cultures. *In Search of Excellence: Lessons from American's Best Run Companies* (Peters & Waterman, 1982) extolled the virtues of 43 U.S. companies that emphasized people and culture. Peters and Waterman described how certain American firms had developed cultures that set them apart by generating superior performance. They identified seven characteristics that differentiated the cultures of firms with excellent performance. These practices offered a new orientation toward managing large firms and proposed that precepts such as "a bias for action," and being "hands on, value driven," were essential to long-term effective organizational performance. This emphasis on "softer" or less structural elements of management had a profound impact on management thinking and focused attention on culture as a potential source of competitive advantage. Their book (Peters & Waterman, 1982) sold more than 3 million copies in four years and became the prototype for similar management texts such as *A Passion for Excellence* (Peters & Austin, 1985) and *Thriving on Chaos* (Peters, 1991). More recent popular management books like *Built to Last* (Collins & Porras, 1994), *Good to Great* (Collins, 2001), and *Diagnosing and Changing Organizational Culture* (Cameron & Quinn, 2011) have continued this tradition, emphasizing leadership and culture as the drivers of organizational performance.

This interest among practitioners continues to the present, with consultants offering guidance on how to build and change culture in organizations (e.g., Bremer, 2012; Connors & Smith, 2012). Articles in the business press routinely invoke the notion of culture to describe firms like General Motors, Amazon and Netflix (Kantor & Streitfeld, 2015; Nocera, 2016; Spector, 2016). Even though the use of the term "organizational culture" is pervasive, its real meaning remains ambiguous, being used to describe everything from Wall Street sexism (e.g., Polk, 2016), to ethical failures of government (e.g., Joyce, 2014), to the competitive advantage enjoyed by firms like Google and Facebook (e.g., Bulygo, 2013; McKracken, 2015), and even to sports teams' success (e.g., Shelley, 2016). Organizational culture appears to be important, but what is it really?

Because managers prioritized culture as so important, it fueled a large and financially lucrative consulting practice. For example, a number of firms specialize in providing culture diagnostic tools and services (e.g., RoundPegg, gothamCulture, Corporate Culture Consulting, Senn Delaney, Human Synergistics, Denison Consulting). Although it is gratifying that an academic subject helped stimulate such widespread applied interest, it is possible that this interest had the unintended consequence of slowing academic inquiry into the topic itself. Ben Schneider, an organizational psychologist who has focused on examining organizational culture and climate, recently highlighted the disadvantage of this co-evolution. He observed that the speed with which culture "became the darling of the management consulting world . . . presented some issues because academics were not quite sure about what culture was and what it represented—and even whether it was appropriate to try to link organizational culture with the financial success of corporations" (Schneider, Erhart, & Macey, 2013: 369). Further, many of the now common instruments used to assess culture were developed primarily as consulting tools rather than research vehicles subject to the rigors of theory and method. Thus, one reason why a unified and nuanced theory of organizational

culture has been slow to emerge is, ironically, because of the early popularity of culture as a management tool.

3. Roadblocks and distracting debates

As managers became more focused on culture, some researchers shifted their focus from the academic study of culture to culture as an applied managerial tool. Instead of advancing theory and measurement, interest turned to helping managers. We believe that this shift in focus may have slowed progress in developing a unifying definition of culture. It may also have contributed to prolonged debates among organizational culture scholars, debates that were so intense that they were labeled the "culture wars" (Martin & Frost, 2011). Below we discuss the problems caused by the lack of a unifying definition of organizational culture and three of the most significant controversies: (1) organizational culture versus organizational climate, (2) arguments over qualitative versus quantitative approaches, and (3) debates about different quantitative approaches to the construct.

3.1. Disagreements about the definition of culture

It can be difficult to amass systematic knowledge about a subject if scholars disagree about basic definitions of the very construct that they are studying. This remains the case with the study of organizational culture. In 1993, Gordon and DiTomaso (1992) reported that a study by anthropologists identified no fewer than 164 meanings for the word "culture" in the anthropology literature (Kroeber & Kluckhohn, 1963). Verbeke, Volgering, and Hessels (1998) reported finding 54 definitions of the term "organizational culture" while Cameron and Ettington (1988) identified 18. Reflecting this confusion, Denison, Nieminen, and Kotrba (2014) noted that, in spite of all the research on the topic, there is still no widely shared definition of the term. Researchers consider organizational culture to be everything from "a sociocultural system of strategies and practices . . . " (Marcoulides & Heck, 1993) to "the glue that holds everything together through shared patterns of meaning" (Martin & Siehl, 1993) to "shared perceptions of organizational work practices . . . " (Van der Berg & Wilderom, 2004) to "Sets of symbols and myths . . . " (Ouchi, 1981) to "shared attitudes and practices" (Tellis, Prabhu, & Chandy, 2009). Alvesson and Sveningsson (2015, p. 36) even argue that culture does not refer to behavior at all but "to mental phenomena such as how individuals within a particular group think about and value reality . . . " The term organizational culture is conceptualized as everything from language (Barley, Meyer, & Gash, 1988; Srivastava, Goldberg, Manian, & Potts, 2016) to emotion (Barsade, & O'Neil, 2014) to "cognitive schema" (Harris, 1994) to shared corporate practices (Christensen & Gordon, 1999). The concept of culture has been conflated with the mechanisms that are used to develop it—such as selection, training, and development processes, incentives, and structures (e.g., Van der Berg & Wilderom, 2004), with various outcomes such as motivation, satisfaction and performance (e.g., Gregory, Harris, Armenakis, & Shook, 2009), and the content of culture content has also been conflated with culture strength (e.g., Kotter & Heskett, 1992; Sorensen, 2002).

In 1996, Ed Schein, perhaps the seminal figure in the field, called for researchers to meet four conditions to make progress in understanding organizational culture. First, the culture research needed to be anchored in concrete observations of real behavior in organizations. Second, these observations needed to be consistent or "hang together." Third, there needed to be a consistent definition of culture that permitted researchers to study the phenomenon. And, fourth, this approach needed to make sense to the concerns of practitioners confronted with real problems, an edict that likely contributed to the consulting emphasis that we discussed above. Without consistency in definition and measurement, he argued, studies of culture will simply fail to aggregate, with different researchers studying different constructs even as they label them "culture." Unfortunately, we believe that this lack of unity describes the current state of the field. While there have been voluminous studies on the subject, it is difficult to see with any clarity what we really understand about culture. Consider, for example, the most studied aspect of culture—its relationship with organizational performance (e.g., Hartnell et al., 2011). Researchers have not been able to consistently show that organizational culture is related to organizational performance, leaving even this most basic link ambiguous (e.g., Chatman, Caldwell, O'Reilly, & Doerr, 2014). To illustrate how this ambiguity affects our understanding of organizational culture, we consider the critical distinctions between construct and predictive (or empirical) validity and suggest that the field has developed predictive validity without construct validity.

3.1.1. Predictive versus construct validity

One of the most significant consequences of not having a unified definition of organizational culture is a lack of construct validity. Further, we suggest that culture researchers have often substituted predictive validity for construct validity (e.g., Cronbach & Meehl, 1955; Messick, 1995). Predictive validity is a measure of a variable's ability to predict theoretically relevant outcomes, answering the question, "Is the variable empirically related to outcomes specified by the underlying theory?" For example, a theory of general intelligence may propose that the concept consists of sub-dimensions representing both quantitative and qualitative abilities. In constructing measures, establishing predictive validity requires answering the question of whether a measure of qualitative intelligence (say the SAT verbal portion) relates in expected ways to performance on a cognitive ability task. Specifically, one could examine if this test is correlated with academic achievement in college English courses and whether the measure of quantitative intelligence (the SAT quantitative measure) relates to performance in mathematics courses. If the answer to these questions is "yes," we have some confidence, but no guarantee, that our measures might be assessing the underlying constructs of qualitative and quantitative intelligence.

In contrast to predictive validity, construct validity refers to the degree to which a test measures what it claims

to be measuring. Since a construct, like "culture" or "intelligence" is an abstract or latent variable, we can begin to amass our understanding of the construct only if the various measures of it are related to it in theoretically predictable ways. We need to demonstrate both convergent and discriminant validity; showing that our measure is related in logical ways to measures of similar constructs but also distinct from similar constructs rather than simply a different way to assess another similar construct. For example, we could examine if a measure of qualitative intelligence is related to similar tests of vocabulary and verbal comprehension, or whether our measure of quantitative intelligence correlates with other measures of quantitative performance like tests of arithmetic reasoning and numerical fluency. And, we could determine if our measures also are demonstrably different from similar constructs like number of years of education or socio-economic status. Obviously, construct validity is essential to proving theoretical claims and to predictive validity.

One complication is that a latent variable may lack construct validity. For instance, if our measures of the purported construct are assessing very different things and do not theoretically cohere, our underlying theory is suspect. And, an even more complicated and subtle problem emerges when our measures demonstrate some predictive validity in that they are related to some valid criterion variables, but lack construct validity. In this instance, we are left with a possibility that empirical associations exist, but a lack of any real coherent theory or understanding for why.

We believe that these problems characterize studies of organizational culture. As reviewed in the following section, researchers have generated multiple measures of the culture construct, each of which demonstrates some predictive validity but their construct validity is less clear. For example, different measures of culture predict individual affective outcomes like job satisfaction and organizational commitment (Hartnell et al., 2011; Kristof-Brown, Zimmerman, & Johnson, 2005). Because the different culture measures reflect very different theoretical constructs, however, they fail to demonstrate strong and consistent relationships across a range of criterion variables (O'Reilly, Caldwell, Chatman, & Doerr, 2014). Noting the trend toward more sophisticated methodologies, Sackmann (2011) argued that using diverse measures of the culture construct was inhibiting paradigm development. Instead, organizational culture reveals an inconsistent pattern of consequences, as noted in many reviews of the topic (e.g., Ehrhart, Schneider, & Macy, 2014; Hartnell et al., 2011). We believe these inconsistencies stem not from a lack of methodological rigor but from a fundamental lack of consistency in how researchers are choosing to define and measure culture.

Instead of beginning with Schein's (2010) widely accepted theoretical framework that culture consists of three interrelated layers; (1) underlying assumptions and beliefs (that may be conscious or unconscious), (2) norms and values about appropriate attitudes and behaviors (that may be espoused or real), and (3) artifacts that may reflect these (e.g., symbols and language), researchers have developed measures based on very different theories and, in some cases, have simply relabeled their measures as "culture." This confusion began very early in culture research and, because of the easy availability of surveys that purport to measure culture, has persisted over decades.

To illustrate how this lack of construct validity has made it difficult to advance the theory and research on organizational culture, consider the findings from a seminal study of the association of organizational culture and organizational performance. Kotter and Heskett (1992) gathered data from 202 U.S. companies across 22 industries for the late 1970s and early 1980s. To assess the "culture strength" of these firms, they surveyed 600 respondents – typically members of competitor organizations – who answered three questions: (1) Have managers of competing firms commonly spoken of this company's "style" or way of doing things? (2) Has this firm both made its values known through a creed or credo and made serious attempts to encourage managers to follow them? (3) Has this firm been managed according to long-standing policies and practices other than those of the incumbent CEO?

Each respondent was asked to rate each of the 202 firms using a 5-point Likert scale ranging from (1) a very strong culture to (5) a very weak culture. A 'culture strength index' was then constructed using an average of these responses.

Several subsequent researchers used the original Kotter and Heskett data (Burt, Gabbay, Holt, & Moran, 1994; Sorensen, 2002) and observed several important limitations. First, respondents were rating more than 200 other companies about which they may have had little or no insight other than the general reputation of the company. In this way, judgments of culture strength may reflect previous performance rather than actual culture. Sorensen (2002) acknowledges that these ratings may reflect public perceptions of the company rather what insiders experience and respond to within the culture. Second, and perhaps more importantly, he notes that the measure being used pertains to culture "strength" and not the content of the culture; that is, what is being assessed has nothing to do with the actual substance of the culture or evaluation of members' consensus about the culture within the organization, only external raters' perceptions of the degree to which there seems from the outside to be a reputation for having a coherent management philosophy.

Studies using these data have shown some associations between culture and performance suggesting the assessment approach has at least some predictive validity. But what is the construct validity of the measure? Although subsequent writers often cite these studies as evidence that culture is associated with firm performance, the measure itself is simply observers' ratings of something called "culture strength" with no clear link to an overarching theory or specification for what the mechanisms of action might be that lead to these results. We have some tantalizing evidence that there seems to be some associations between observers' ratings and subsequent firm income growth, but little insight into how or why these relationships might exist. In other words, we have a modicum of predictive validity but no construct validity.

Studies of this type (e.g., Bezrukova, Thatcher, Jehn, & Spell, 2012; Tellis et al., 2009) are often conducted with rigorous measures and high levels of technical proficiency. In spite of labeling these as studies of "organizational culture," however, the underlying measures are clearly assessing very different things and, as such, provide little insight into the construct itself. The results suggest that some underlying black box of "culture" is associated with firm performance but the underlying mechanism of action is unclear. Many other studies of this sort exist (e.g., Boyce, Nieminen, Gillespie, Ryan, & Denison, 2015; Christensen & Gordon, 1999; Gregory et al., 2009; Xenikou & Simosi, 2006). In the aggregate it appears as though the field is accumulating insights into organizational culture, but upon closer inspection, we still have questions about what is really being assessed, and thus, have trouble answering questions about the causes and consequences of organizational culture. The term organizational culture itself seems to remain, as John Van Maanen said almost 30 years ago, "a catchall idea . . . stimulating, productive, yet fuzzy" (Van Maanen, 1988, p. 3), or worse yet, what Powys said in 1930, "Culture is what remains after you forgot what it was you originally set out to learn" (Powys, 1930).

In addition to questions about the construct validity of various approaches to organizational culture, several debates have also stalled our ability to advance the field. First, the culture-climate debate has led to confusion about how the two constructs are distinct and how they separately or jointly influence behavior. Second, culture researchers have taken different approaches to assessing culture and have erected a qualitative versus quantitative barrier. We review these debates and then address a related issue, which is that even among so-called quantitative survey researchers, measurement approaches have been so varied that establishing construct validity has been difficult.

3.2. The organizational culture versus climate debate

Culture became a topic of interest to organizational researchers in the late 1970s and early 1980s, but industrial-organizational psychologists were already focusing on the topic of "organizational climate." In 1968, Litwin and Stringer (1968) published a paper proposing that employees' perceptions of properties of the work environment such as decision autonomy, organizational structure, conflict, and employee concern could affect employee motivation and behavior. They labeled this construct "organizational climate." Since that seminal paper, organizational climate has been a continuing topic of interest among industrial-organizational psychologists and the subject of numerous studies (see Ehrhart et al., 2014, for a comprehensive review).

Organizational climate is typically defined as the "shared perceptions of and the meaning attached to the policies, practices and procedures employees experience and the behaviors they observe getting rewarded, and that are supported and expected" (Schneider et al., 2013, p. 362). The emphasis is on assessing employees' perceptions of observable aspects of the work environment such as decision autonomy, management support, or work unit structure. Climate has been assessed as a set of generic dimensions reflecting perceptions of specific aspects of the work environment like management support or decision autonomy, or focused on a domain-specific dimension such as safety climate (e.g., Zohar & Luria, 2005), service climate (e.g., Walumbwa, Hartnell, & Oke, 2010), diversity climate (McKay, Avery, & Morris, 2009), or ethics climate (Dickson, Smith, Grojean, & Erhart, 2001).

A climate is said to be "strong" when there is widespread agreement or consensus among members of a group, typically measured as the standard deviation of the individual responses to the climate dimension being assessed. Research has demonstrated that certain climates can be related to outcomes including unit performance, service quality, employee satisfaction and turnover, and that climate strength often moderates these associations (Ehrhart et al., 2014).

Though climate is theorized as a group-level construct that represents the collective perceptions of some objective aspect of the work environment, it is always assessed at the individual level using surveys that ask respondents (not informants) about their own perceptions of these aspects (e.g., Carr, Schmidt, Ford, & DeSchon, 2003). Further, researchers typically examine only one climate dimension at a time (e.g., Tucker, Ogunfowora, & Ehr, 2016) and relationships among climate dimensions are rarely theorized or measured. Researchers have raised concerns about the overlap of climate measures with other constructs such as job attitudes and organizational structure (e.g., Ostroff, Kinicki, & Clark, 2002), leading Zohar and Hoffman (2012) to note, "This failure . . . raises issues with respect to discriminant validity and conceptual clarity" (p. 648).

In terms of similarities, both organizational culture and organizational climate are constructs that have been used to understand psychological phenomena and behavior in organizations; both focus on the creation and impact of social contexts, and, in this sense, they are complementary (Ostroff, Kinicki, & Tamkins, 2003a; Ostroff, Kinicki, & Tamkins, 2003b; Schneider et al., 2013). Both constructs also focus on shared meanings, but climate is grounded in an individual's perceptions of aspects of organizational structure and systems that are aggregated by researchers to form a group-level measure, while culture reflects individuals' assessment of the expected attitudes and behaviors (norms) required to fit in and be seen as a group member (Schneider et al., 2013). Since climate focuses on perceptions of situational phenomena (e.g., organizational systems and structures), it is, by definition and measurement, more transitory and easily changed, than culture, which is viewed as relatively stable, enduring, and interconnected.

Culture, on the other hand, is rooted in fundamental values and beliefs and is more enduring. While climate has unit level effects that are relevant to a particular aspect of climate such as how service climate influences customer satisfaction (e.g., Schneider, White, & Paul, 1998), culture is diffuse and likely to have more pervasive effects on organizational functioning and performance (e.g., Kotrba et al., 2012). For example, cultures that emphasize being innovative have higher performance over time (e.g., Chatman et al., 2014). Culture researchers have largely focused on shared beliefs, assumptions, values and norms.

Thus, culture differs from climate in several important ways. First, culture does not focus on observable perceptions of the work environment, but begins with an emphasis on the norms and values that provide signals to people about how to act and feel. These norms and values may be uncoupled from any specific perceptions of the objective work environment and reflect passed down traditions, the normative and informational influence of others or even historical beliefs (e.g., Zucker, 1977).

Second, culture is explicitly focused on shared meaning, values and norms as sources of collective identity and commitment (Harrison & Carroll, 2006; O'Reilly, 1989; O'Reilly & Chatman, 1986). Culture is often assessed by organizational "informants," who are asked to report broad patterns of members' behavior, unlike respondents who report on their own perceptions, (e.g., Chatman, 1989). In contrast, climate researchers use a respondent perspective, asking questions such as, "My manager is responsive to my requests for help or guidance" (e.g., Schneider et al., 1998, p. 153). Thus, climate is an aggregation of individual perceptions and attitudes about the work environment, not an assessment of shared norms. Unlike culture, climate focuses on perceptions of structures and processes, not necessarily the norms and behaviors expected as a part of being an accepted member of the group.

Third, culture is typically less focused on a particular aspect of the work environment like safety or service, but encompasses a broad range of related norms and values that may or may not specifically focus on a particular organizational outcome. The assessment of culture, for instance, may include norms for collaboration, openness, or innovation that have nothing to do with short-term goals like safety or service. Thus, culture can be strong (widely shared and strongly sanctioned) for certain dimensions and weak for others. It is also possible for culture to be unrelated, or even negatively related, to organizational outcomes (e.g., Kotter & Heskett, 1992; O'Reilly & Chatman, 1996).

Finally, culture has a prescriptive force to it, suggesting what attitudes and behaviors are appropriate for the situation (e.g., it's inappropriate to disagree with others publicly; it is okay to make a mistake). Failure to comply with cultural norms can lead to sanctions and exclusion from membership in the group (e.g., Sherif, 1936). Climate, on the other hand is more descriptive and does not include an implied normative force (e.g., there is open communication about safety issues in this workplace).

Initially, culture and climate researchers argued about how and what was being measured and if one approach was superior to the other, but more recently researchers have treated culture as a precursor to climate (Ostroff, Kinicki, & Muhammad, 2012), suggesting that the policies and practices that form the basis for organizational climate are unlikely to exist unless there is a deeper set of norms and values that support these. This has led some researchers to view climate as an outcome of culture (e.g., Ehrhart et al., 2014, p. 229). In contrast to culture, climate provides a more proximal way to assess how shared meanings can affect specific organizational outcomes like customer satisfaction and compliance with safety standards. This offers more direct and tangible insight into how specific policies and practices affect employee attitudes and behaviors. Culture, on the other hand, provides a more holistic perspective on the range of norms and values that may characterize a group or organization and provides the context in which climates may operate. Research has shown that culture, when enforced, also has the potential to shape and control behavior by encouraging members to internalize shared values and norms (e.g., O'Reilly & Chatman, 1986, 1996).

Unlike other debates within the field of culture research, the culture-climate debate has been generative. Although some differences remain in methodology and terminology, it appears that both sides have contributed to our understanding of how individuals make sense of their organizational contexts and how these collective meanings shape subsequent attitudes and behaviors. Emerging research reflects the complementarity and interactions between the constructs. For example, a recent study examined how the culture of states in which organizations are embedded – specifically the strength of norms and tolerance for deviance (defined as cultural tightness and looseness) – influenced an organization's diversity climate (Arvey, Gelfand, & McKay, 2016). We see this as an encouraging sign that the camps are effectively integrating the two constructs.

3.3. Qualitative versus quantitative conceptions of culture

Although less salient in the last decade, another debate among scholars studying culture has focused on the appropriate methodology used to study the construct—qualitative versus quantitative methods to assess culture. On one side of this dispute are those who argue that cultures are unique and can only be suitably understood through deep immersion in the organization. This approach has emphasized the first layer in Schein's 3-layer classification–underlying assumptions and beliefs. If, as socio-cultural anthropologists have argued, cultures are characterized by implicit beliefs and unconscious assumptions, then the appropriate way to study them is by a deep, time-intensive immersion by the researcher allowing these implicit or unconscious beliefs to be surfaced by a sentient observer over weeks or months. Advocates of this approach argue that understanding the meaning of rituals and symbols requires a qualitative approach to studying culture since quantitative approaches are ill-suited to access unconscious or implicit beliefs and assumptions (Alvesson & Berg, 1992; Martin, 2002; Smircich, 1983). From this ethno-methodological or qualitative perspective, organizations are cultures. In this view (emic) each organizational culture is seen as idiosyncratic and cannot be compared with others.

In contrast, a more functionalist view of culture focuses on Schein's second layer—norms and values (e.g., Chatman, Polzer, Barsade, & Neale, 1998; Chatman et al., 2014; Harrison & Carroll, 2006; Lauver & Kristof-Brown, 2001; O'Reilly & Chatman, 1996). From this perspective, culture is something an organization *has*, not something an organization *is*, and cultures can be compared across organizations (*etic*). A functionalist approach typically studies

culture by assessing the espoused and operating values and norms that guide behavior, often using quantitative approaches. Unlike the ethno-methodological approach, which emphasizes the uniqueness of each organization, the functionalist perspective focuses on how culture affects both individual and organizational behavior and how commonalities in culture can be compared across organizations.

Since the assumptions underlying these two perspectives are so different, there has been little or no agreement about the basic definition of culture and how to validly assess it (e.g., Rousseau, 1990). Researchers in the qualitative or emic tradition have argued that culture is inherently subjective and requires that a researcher have "extraordinary sensitivity, an almost preternatural capacity to think, feel, and perceive like a native" (Geertz, 1983, p. 86). They have also raised legitimate concerns about the difficulty of characterizing organizations in terms of a single overall culture because organizations typically contain significant internal heterogeneity (e.g., Martin, 1992). And they have suggested that responding to standardized surveys is the wrong way to capture cultural differences among organizations. This is because findings derived from standardized surveys are affected by numerous factors including how facile people are with verbal responses, how willing members are to be candid in their responses, and whether underlying dimensions conflate multiple attributes and multiple meanings (e.g., Fiske, 2002). These concerns suggest that standardized survey approaches to assessing culture are constrained in terms of their ability to capture cultural dimensions accurately. Instead, from this perspective, culture is best understood though gaining insight into how meaning is constructed and subjectively experienced.

When done well, this research can provide insight into the unconscious or implicit assumptions that form the basis for norms and values. Because these insights are typically unique to a particular group, tribe, or organization, however, they do not easily permit comparisons across these entities. Thus, at their best, these studies can provide deep and valuable insight into context specific circumstances such as how meaning is constructed (e.g., Malinowski, 1944). At their worst, emic studies offer a series of case studies that cannot be aggregated to generalizable conclusions about organizational culture.

In contrast, the more functionalist, quantitative, or etic approaches to studying culture emphasize norms and values that characterize how members of groups and organizations behave, think, and feel (e.g., Barsade & O'Neill, 2014). The theoretical construct used to define culture is a focus on the norms and values that characterize a group or organization and measuring culture requires a focus on the content, consensus and intensity of these shared meanings (Caldwell & O'Reilly, 1985; Jackson, 1966). The presumption is that informants can accurately describe those attitudes and behaviors that are approved or disapproved of by other group members. No attempt is made to discover underlying beliefs or assumptions, nor are researchers called upon to interject their perspective on the culture into their research.

It is striking that, although both camps purport to study organizational culture, the underlying constructs are not at all the same. In the emic approach the phenomenon being studied is how beliefs and assumptions shape shared meaning. In the etic approach the construct is explicitly based on norms and values and how these shape behavior. The "culture wars" that Martin (2002) refers to superficially reflect a difference in methodological approach (qualitative versus quantitative), but at a deeper level reflect fundamental differences in the theoretical construct being studied. If the two sides had not begun by laying claim to studying "organizational culture," but began with different labels for their research foci (say "how unconscious beliefs shape subjective meaning" versus "how norms shape behavior in groups and organizations"), the qualitative-quantitative debate might never have emerged. Unfortunately, the net result is that there has been little cumulative research bridging the two camps and an inability to advance theoretical understanding (Alvesson, 2013; Harrison & Carroll, 2006; Martin, 1992; Rousseau, 1990). We believe that this debate has, regrettably, generated more heat than light because of a lack of fundamental agreement about the underlying construct. As such, we believe that the qualitative versus quantitative debate should be retired. Our view, likely not shared across the domain of organizational culture research, is that the qualitative approach can be most effectively used to augment a more systematic science of organizational culture by providing richer details and illustrations of assumptions at a deeper level than behaviors at the more observable level associated with various norms and values.

3.4. Different quantitative approaches to studying organizational culture

Aside from the climate-culture debate and the qualitative-quantitative debate, perhaps the biggest obstacle to developing an integrative theory of culture is that scholars have adopted vastly different construct definitions and measurement approaches. Jung et al. (2009) identified no fewer than 70 culture diagnostic instruments. They note that many of these instruments create cultural typologies that categorize organizations by their type of culture based on predefined dimensions (e.g., Ashkanasy, Broadfoot, & Falkus, 2000). Other approaches are less prescriptive and more empirical, relying on specific cultural variables in a particular organizational setting. The risk with this approach is a failure to appreciate the deeper meanings of culture dimensions and an inability to access underlying assumptions that emic approaches, using qualitative methods, such as researchers acting as participant observers, can offer. Even among those who examine culture quantitatively, these differences are stark. Below we consider the four most prominent quantitative approaches to assessing organizational culture and highlight both their differences in theoretical underpinnings and construct validity.

3.4.1. The Denison Organizational Culture Survey (DOCS)

3.4.1.1. Theory. Dan Denison has been a consistent contributor to the organizational culture domain beginning with his 1984 paper linking culture to organizational performance (Denison, 1984). He and his colleagues have generated significant empirical evidence examining the link between organizational culture and effectiveness (e.g., Boyce et al., 2015; Kotrba et al., 2012). Denison claimed that organizational researchers "Have seldom developed explicit theories of organizational culture and effectiveness or presented supporting evidence (Siehl & Martin, 1990). Progress has been made in related research areas such as socialization (Van Maanen & Barley, 1984; Chatman, 1991) and change (Schein, 1985; Kotter & Heskett, 1992), but with few exceptions (e.g., O'Reilly, 1989) little attention has been given to the issue of organizational culture and effectiveness" (Denison & Mishra, 1995, pp. 204–205).

In response, Denison and Mishra (1995) developed " . . . an explicit theory about culture and effectiveness that can extend the implicit, but often unelaborated themes that appear in many culture studies" (1995: 205). He defined culture as the "underlying values, beliefs, and principles that serve as the foundation for an organization's management system as well as the set of management practices and behaviors that both exemplify and reinforce those basic principles" (Denison, 1990, p. 2). This model identifies four "traits" of organizational culture that might influence an organization's ability to be effective. The most effective organizations, according to Denison and his colleagues (Boyce et al., 2015: p. 341), "are characterized by a strong *mission* and high levels of *employee involvement, internal consistency* and *adaptability*." Mission refers to how clearly the organization has articulated a strategic direction and goals and metrics that measure progress against strategic goals. Employee involvement reflects how much the organization relies on employees to make decisions by empowering and training them as well as structuring work in cooperative teams. Internal consistency is based on whether an organization has espoused a set of values that are consistent and to which they visibly adhere, including interdepartmental coordination. Finally, adaptability is the extent to which organizations focus on learning from competitors and customers and are able to change.

Three issues related to the underlying dimensions theorized in Denison's conceptual model and empirical evidence make it difficult to advance a theory of culture. First, the four traits cover a wide and diverse range of organizational elements that are a mix of very different psychological, sociological, and economic constructs including behaviors, attitudes, organizational design, and strategic aspirations. With the exception of adaptability, it is unclear what is distinctively cultural about the four traits. For example, an organization's mission, which is typically defined as the purpose of the organization or what it is attempting to accomplish (e.g., Hill & Jones, 2008) is not the same as culture, which is most often defined as shared expectations about appropriate ways of behaving (e.g., Schein, 2010). Further, many would object to the idea that the mission is somehow subordinate, or a part of an organization's culture, which is what Denison and his colleagues imply by making *mission clarity* one of the four traits of culture. It seems clear that an organization can have a highly salient mission but a weak culture and vice versa, a strong culture with little agreement on the mission. To claim that having a mission constitutes, essentially, a quarter of an organization's culture seems difficult to reconcile with typical notions of mission (e.g., Hart, 1992). Researchers might argue that perceptions of strategic clarity are more akin to a climate dimension and not an assessment of norms or values.

Similarly, employee involvement refers to policies and practices that engage and motivate employees (sample item: "Everyone believes that he or she can have a positive impact"). While valuable, these practices are potentially independent of assumptions, norms, values, or cultural artifacts. Again, it is conceptually possible for an organization to have a strong culture that does not engage employees (e.g., a strong anomic culture). The point is that, like mission, employee involvement is a distinct construct from organizational culture. In fact, an entire research domain examines employee involvement, along with the closely related constructs of commitment and organizational citizenship behavior, as an outcome of various management practices and an organization's culture (e.g., Caldwell, Chatman, & O'Reilly, 1990; Shadur, Kienzie, & Rodwell, 1999; Van Dick, van Knippenberg, Kerschreiter, Hertel, & Wieseke, 2008). Thus, the issue is whether the DOCS measures the mechanisms that drive employee involvement versus whether there is a norm that people are expected to be involved. We suggest that the DOCS assesses employee capability development (a mechanism) and empowerment (employees are highly involved in their work—an outcome; they believe they can have an impact—an outcome). Further, the involvement dimension also assesses "Business planning is ongoing and involves everyone"—a perception of climate. These are not norms or values but are perceptions of the work environment (climate) and confound the distinction between outcomes and mechanisms.

Finally, the trait of consistency appears to assess what climate researchers would label as "climate strength" (how widely shared perceptions are) and culture researchers would assess as consensus of the normative order. Consistency is a property of how much agreement exists, not of the substance of the culture. Thus, when compared to Schein's three layers of culture, it is only Denison's adaptability trait that appears to reflect norms and values. The other elements, while potentially important for organizational effectiveness, seem conceptually distinct from organizational culture.

Another issue is that the construct definitions of the four traits are potentially overlapping. For example, it is hard to imagine that mission and internal consistency could be particularly distinct from one another. If mission is "how clearly the organizational has articulated a strategic direction and goals and metrics that measure progress against strategic goals" it seems only logical that it would overlap at least somewhat with the extent to

which an espoused set of values are consistent and visibly adhered to, or the trait of internal consistency. Thus, the dimensions are not easily identified nor are the relationships among them very clear.

Lastly, the theory confounds elements of cultural content, such as whether the culture focuses on adaptability and team-based decision making, with elements of a culture's strength defined in terms of how much people agree about the culture and the intensity with which certain attributes are enforced. For example, the adaptability trait could be agreed upon but lack intensity or organizational members might show great intensity about adaptability but disagree how best to accomplish it, hindering the organization's ability to change.

Taken together, these issues make it difficult to determine whether the four traits uniquely and comprehensively comprise an organization's culture. Denison's theory and measurement approach are more akin to an overall model of organizational effectiveness; they identify factors that contribute to an organization's effectiveness rather than necessarily identify a construct that uniquely defines an organization's culture. Indeed the original survey on which the Denison's model is based was designed to assess organizational effectiveness, not organizational culture per se. From an applied perspective, it might be useful to begin with organizational elements that contribute to organizational effectiveness and work backward to construct a model and measurement approach, but is not as helpful in advancing a theory of organizational culture.

3.4.1.2. Measurement. Denison's popular consulting tool, the Denison Organizational Culture Survey (DOCS), has been used by more than 5000 companies over the last 20 years (http://www.denisonconsulting.com/diagnostics/organizational-culture). It has been the primary tool for validating the theory. Though Denison's research program has incorporated interesting exogenous measures of effectiveness, such as scores on customer satisfaction surveys and product sales (e.g., Boyce et al., 2015), the method suffers from three issues that make it difficult to validate the theory.

As we noted above, a first issue is that that the items represent a mix of organizational and psychological constructs. Some items are attitudes that are asked in the abstract, distinct from the organization (e.g., "Short term thinking often compromises long-term vision"), while others represent behaviors and management practices (e.g., "We continuously track our progress against our stated goals"). Some items ask participants to state their beliefs about others ("Our vision creates excitement and motivation for our employees"), while other items represent personal beliefs ("The strategic direction of this organization is unclear to me"). Denison and Mishra (1995) acknowledge these issues, observing that in the development of their instrument "Neither the survey instrument nor the traits operationalized were ideal for culture research (p. 207)."

A second issue is that the items tend to be framed in such a way that participants can easily identify socially desirable items that could bias their responses (Paulhus & Reid, 1991). For example, the items, "the capability of the people in this organization is viewed as an important source of competitive advantage" and, "the organization has an ethical code that guides our behavior and tells us right from wrong" are phrased in ways that encourage a positive response. Even the twelve percent of items that are framed negatively make the socially desirable response fairly obvious (e.g., "The interests of the final customer often are ignored in our decisions"). The five-point, Likert-type response scale further increases the likelihood of socially desirable responding by not forcing respondents to choose between or rank the traits that describe their organization.

A third problem is that some items use colloquial language that may not be understood similarly across organizations and national cultures (e.g., "The managers in this company 'practice' what they preach" and "Lots of things 'fall between the cracks' in this organization"). And a number of items are double barreled making responses ambiguous ("Work is sensibly organized in this organization so that each person can see the relationship between his/her work and the goals of the organization"). As underscored in books on measurement and survey design, questions that conflate two possible responses (e.g., "work is sensibly organized" and "people can see the relationship between their work and the goals of the organization") can undermine the reliability and validity of responses (Krosnick, 1991).

Denison's empirical evidence demonstrating the reliability of the scales and correspondence between the DOCS survey and objective measures of an organization's effectiveness is impressive (e.g., Denison et al., 2014). He and his colleagues have found that high scores on his survey relate to such outcomes as customer satisfaction, product sales, sales growth and market-to-book ratios (e.g., Boyce et al., 2015; Denison & Mishra, 1995; Kotrba et al., 2012). Thus, the measure has demonstrated predictive validity. The problem, from the perspective of building a theory of organizational culture, is that Denison's model is overly inclusive, containing a mix of structural design, strategic focus, management practices, individual attitudes, and beliefs about organizational approaches. And, without forcing respondents to make more fine-grained distinctions between what the organization emphasizes more or less, key information about the shared nature of the culture and the intensity of certain beliefs over others is lost. Thus, the theory and measurement approach fail to isolate the construct of organizational culture and distinguish it from other key organizational constructs, making the survey useful as a checklist for organizations to become effective rather than necessarily offering a clear assessment of organizational culture. The survey offers impressive predictive validity, but it lacks construct validity in that it is unclear whether it is measuring organizational culture or a broader conception of organizational effectiveness.

3.4.2. The Competing Values Framework (OCAI)

3.4.2.1. Theory. The Competing Values Framework (CVF) emerged in the 1980s and represents the most researched of the typological approaches to organizational culture. Its

proponents claim that studies with CVF have been used in more than 10,000 organizations around the world (Cameron, Quinn, DeGraff, & Thakor, 2006) and in a large number of academic investigations (Hartnell et al., 2011). The CVF is seen as representing two orthogonal dimensions: (1) flexibility versus control, and (2) internal focus and integration versus external focus and differentiation. These four quadrants result in four types of "organizational culture:" *clan*,*adhocracy*, *market*, and *hierarchy*. As the title of the instrument suggests, these "values" are seen as "competing."

The origins of the Competing Values Framework and its corresponding measurement approach, the Organizational Culture Assessment Instrument (OCAI), reveal some of the same problems as those that characterize the Denison model. To create the CVF, Quinn and Rohrbaugh (1981) used Campbell's (1977) list of 30 "indices of effectiveness." These were sorted first by seven academics to determine if they represented measures of organizational performance and managerial tasks at the organizational level. They were then further screened by 45 additional raters and reduced to 16 items that reflected three underlying dimensions. The content of the items included topics like "training and development," "planning and goal setting," "evaluation by external entities," and "readiness." Campbell originally referred to this survey as a measure of organizational climate (Ehrhart et al., 2014). Quinn and Rohrbaugh (1981, 1983) relabeled these dimensions and claimed that they represented three sets of "competing values," but never provided a specific logic for why the indices necessarily represented an organization's culture as defined by Schein (2010), an important step since Campbell's original intent was to explore organizational effectiveness. They further argued that these 16 items reflected four models of organizational effectiveness; the human relations model, the open systems model, the internal process model, and the rational goal model.

To their credit, Quinn and Rohrbaugh (1981) did not make the leap from calling these so-called competing values to "organizational culture." Indeed, their paper was called, "A Competing Values Approach to Organizational Effectiveness." But by 1985, the CVF was viewed as representing "four organizational culture types" (Cameron, 1985), and in 1991, Cameron and Freeman (1991, p. 26–27) offered the following logic for essentially relabeling the CVF model of effectiveness as a model of culture:

> "The Jungian framework and the competing values model are discussed here because the dimensions underlying these models organize the different patterns of shared values, assumptions, and interpretations that typify organizations. They form the basis, therefore, of a typology of organizational cultures. Because cultures are defined by the values, assumptions, and interpretations of organization members, and because a common set of dimensions organizes these factors on both psychological and organizational levels, a model of culture types can be derived."

Once characterized as a measure of culture, other researchers proceeded to use the CVF to assess culture, rather than as a measure of organizational effectiveness (e.g., Cameron & Quinn, 2011; Cameron et al., 2006; Howard, 1998).

3.4.2.2. Measurement. The OCAI consists of a survey with six categories (Dominant Organizational Characteristics, Leadership Style, Management of Employees, Organizational Glue, Strategic Emphasis, Criteria for Success) in which respondents distribute 100 points among four items for each category that represent the four competing values. Examples of the four items include, for the category "Dominant organizational characteristics," "personal, like a family," "entrepreneurial, risk taking," "competitive, achievement oriented," and "controlled and structured." And, for the category, "Criteria for success" the four items are, "development of human resources, teamwork, concern for people," "unique and new products and services," "winning in the marketplace, outpacing the competition," and "dependable, efficient, low cost." The items are then assessed according to the number of points allocated; more points allocated to "A" items indicates a *Clan* culture, to B items indicates an *Adhocracy* culture, to "C" items indicates a *Market* culture and to "D" items indicates a *Hierarchy* culture.

There are a variety of features of this assessment approach. First, the CVF theory suggests that the four core values represent opposite or competing assumptions, with each value being the opposite of the value at the other end of the continuum. It is difficult, however, to determine what about the Competing Values Framework is actually competing. Hartnell et al. (2011) conclude that, "Results suggest that the CVF's culture types in opposite quadrants are not competing" (p. 687), and that rather than being competing values they may be more complementary than contradictory. The possibility that some of these values can exist simultaneously in organizations has been substantiated by research on ambidextrous organizations, showing that organizations can simultaneously emphasize efficiency and exploiting a market while at the same time exploring new markets and investing in innovation (e.g., O'Reilly & Tushman, 2016). Further, though the allocation of 100 points is useful in that it enables respondents completing the OCAI to prioritize some attributes over others, the logic for why the four items fall into one category (in which the 100 points is distributed) versus another is unclear. For example, the item "unique and new products and services" which is placed in the "Criteria for success" category could just as easily be placed in the Strategic Emphasis category instead. Additionally, some items appear in multiple categories with little justification (e.g., "risk taking" appears in the Dominant Organizational Characteristics, Leadership Style, and Management of Employees categories, but then, surprisingly, not in the Strategic Emphasis or Criteria for Success categories). On the other hand, requiring respondents to allocate 100 points, creating an ipsative scale, can be valuable. Respondents are asked to allocate points among the fixed set of items placed in each category requiring that those items be explicitly rated relative to one another, and potentially sharpening the distinction among the categories since it avoids some halo effects. Interestingly, Hartnell et al. (2011 p. 682) miss this property of the OCAI in their

review even though they explicitly excluded studies using culture measures that were ipsative, not recognizing that the OCAI fell into that category.

Of greater concern, however, is the difficulty of ascertaining the construct validity of the OCAI. While culture in the form of norms and values may be a part of the CVF model, it also includes the assessment of a number of other constructs such as organizational structure, leadership, organizational practices, agreement, and strategy. This breadth and ambiguity in the construct and its measurement is visible in a recent meta-analysis of 89 studies using the CVF (Hartnell et al., 2011). Although the results show some predictive validity in that that different types of cultures are sometimes related to subjective measures of organizational outcomes, the authors conclude that there is only modest support for the nomological validity of the framework and that "The results suggest that identifying 'dominant culture' types may be of limited utility because they do not account for culture's bandwidth (p. 687)." Ostroff and Schulte (2014) also note that although there is an assumption that an internally consistent set of values underlies each of the four culture types, no evidence exists confirming this.

Absent convergent and discriminant validity, it is difficult to distinguish the CVF from other related organizational constructs like organizational climate and structure. Culture becomes, at once, many aspects of organizations – everything – and ultimately an indistinct construct – nothing. And, even if organizations can be viewed as inhabiting these cultural types by displaying certain attributes and practices, it is unclear whether the an organization inhabits them because they value them per se.

3.4.3. The Organizational Culture Inventory (OCI)

3.4.3.1. Theory. The impetus for the design of the OCI was to identify the pressures on organizational members to behave in dysfunctional ways and to improve individual development efforts. It originated with consulting experiences using the Life Styles Inventory developed by Lafferty (1973) that assessed 12 "thinking styles." This was a survey used by organizational change consultants that assessed individual differences in problem solving effectiveness, managerial performance, and individual well-being. Consultants recognized that organizational participants sometimes manifested similar dysfunctional styles and hypothesized that this could be the result of group pressures to conform. A modified version of the instrument was then developed to assess how individuals were expected to think, given pressures to conform or fit in. These 12 styles include: humanistic-helpful, affiliative, approval, conventional, dependent, avoidant, oppositional, power, competitive, perfectionistic, and self-actualizing. Although designed primarily to reflect people's behavioral tendencies, the styles are also assumed to reflect the direction and intensity of behavioral norms. So, for example, a high score by respondents on self-actualization would presume to reflect an organizational culture that values creativity and quality over quantity. An oppositional culture would be one that is characterized by high levels of conflict and in which criticism is rewarded.

Cooke and Rousseau (1988) report that they based each of the 12 styles, as well as their circumplex positioning, on three general domains of psychology: (1) Clinical psychology such as Leary's (1957) interpersonal personality system as well as research on personality by David McClelland (e.g., McClelland, Atkinson, Clark, and Lowell, 1953), Rogers (1961), and Horney (1950); (2) Human needs and motives derived from Maslow's Needs Hierarchy (1943); and (3) research on leadership styles based on work by Stogdill (1963) and others. Thus, compared to the prior two models, this approach is grounded in individual level human psychology rather than in social systems or organizations. Norms and expectations in organizational settings are derived from aggregating assessments based on individual-level styles and motives.

3.4.3.2. Measurement. The Organizational Culture Inventory consists of 120 items that assess 12 sets of behavioral norms (ten items per norm), called "styles," associated with the thinking and behavioral approaches necessary to meet others' expectations (Balthazard, Cooke, & Potter, 2006; Cooke & Rousseau, 1988). The 12 norms measured by the OCI reflect two fundamental underlying dimensions: a concern for people and an emphasis on tasks, and are associated with three types or clusters of organizational culture, defined as *Constructive*, *Passive/Defensive*, and *Aggressive/Defensive*. The three clusters are each defined by four types of norms. For example, an aggressive/defensive culture is characterized by norms that are oppositional, power-oriented, competitive, and perfectionistic. The three culture clusters are proposed to affect both individual and organizational outcomes (e.g., satisfaction, turnover, quality, service). In addition, the 12 norms are differentiated based on their ability to fulfill higher-order satisfaction needs or lower-order security needs.

Cooke and Szumal (2013) report that more than two million respondents have completed the OCI. To assess the current culture, respondents are asked to indicate, using a 5-point Likert type scale (1 = 'not at all' and 5 = 'a great extent'), the extent to which each of the 120 items "help people fit in and meet expectations in their organization," and "the behaviors that ideally should be expected and encouraged in your organization to maximize its effectiveness" (Cooke & Szumal, 2013: 1835). Items include questions such as "show concern for the needs of others," "be a 'nice guy'," "willingly obey orders," and "shift responsibilities to others."

Though this approach is more organizationally relevant than the prior two approaches, because it was explicitly developed as a way to measure how people feel and behave within organizations, and appropriately asks participants to report as organizational informants, there are still some concerns about the instrument's effectiveness as an organizational culture assessment. First, the anchor question for the current culture could be viewed as double-barreled since people could work to fit in with

colleagues but colleagues together could resist their organization's expectations (e.g., Roy, 1952), making it hard for respondents to address the items unambiguously (e.g., expectations from management or co-workers?). Second, the use of Likert-type items does not require that informants make fine-grained discriminations or prioritize some norms as more important than others, allowing all norms to be simultaneously high, medium or low. This defies notions that cultures represent an organization's relative priorities and that no organization can prioritize a large set of equivalent expectations simultaneously. This approach, thus, could bias cross-organizational comparisons. Further, a norm that scores low is interpreted to be a weak norm, while norms with high scores are supposed to encompass strong expectations for a behavioral style. This confounds the strength of a norm with its content.

Further, in the development of the scales as shown in Table 2 of Cooke and Szumal (2013), it appears that the dimensionality of the instrument was determined by factor analyzing the 12 scales rather than the full 120 items. This table also reports one scale (passive-defensive) with an eigenvalue below one. Moreover, the approach lacks substantiation that this is a relevant and comprehensive set of styles and that the three types are valid. In other words, the typology is based on researcher-derived conceptualizations of leadership development rather than culture, as defined in Schein's terms. Other peculiarities in the item set exist. For example, some items (e.g., defensive) appear twice and the norms appear relevant to any setting for human interaction, not organizations per se. Finally, many items stimulate socially desirable responses (e.g., "treat people as more important than things" and "make 'popular' rather than necessary decisions;" "remain aloof from the situation" "refuse to accept criticism," "maintain an image of superiority)." Other items are ambiguous such as "stay conscious of fashion," "be the center of attention," "never appear to lose," making responses hard to interpret.

Despite these methodological issues, the OCI was originally conceptualized and designed with behavioral norms in mind, making it more relevant to organizational culture as opposed to broader constructs such as organizational effectiveness.

3.4.4. The Organizational Culture Profile (OCP)

3.4.4.1. Theory. The OCP approach began with the three-level conception of culture originally proposed by Schein (2010) and focused specifically on the norms and values that might characterize a group or organization's culture. The theory is based on organizational culture as a form of social control and the associated normative social influence that arises when people in an organization agree about the behavioral norms that characterize their group (Chatman, 1989; O'Reilly, 1989; O'Reilly & Chatman, 1996). We discuss this theory in greater detail below in the section, "A Comprehensive Theory of Organizational Culture," and immediately below, review the associated measurement tool, the Organizational Culture Profile.

3.4.4.2. Measurement. The Organizational Culture Profile was designed explicitly to assess organizational culture, unlike the DOCS and the OCAI. The theory and method were developed together, with the OCP measuring the distinctive qualities of an organization's culture by being based on norms, providing a comprehensive list of attributes, requiring that the attributes be organized in terms of their relative importance to one another, and asking organizational members to serve as informants of their culture by noting patterns of beliefs and expectations shared by members rather than their own attitudes and preferences. Unlike the three previously described instruments, the OCP does not rely on an a priori framework but began by identifying a universe of 110 descriptors that might characterize the norms and values of any organization. The original universe of items was winnowed to a set of 54 descriptors through an iterative process with specific criteria, including that the final item set would be comprehensive and generalizable (able to describe an organization regardless of size, industry, age, etc.), readable, low in redundancy, and discriminating in that no item would reside in the same category for all organizations (Chatman, 1989; Chatman, 1991; O'Reilly, Chatman, & Caldwell, 1991).

To assess the organization's culture, members are asked to participate as informants of their organization's norms. The OCP first defines culture: "*By culture, we mean those things that are valued or rewarded within your organization—that is, the pattern of beliefs and expectations shared by members, and the behaviors that result from them.*" *Informants are then asked to, "Rank the value statements that are most and least characteristic of your organization's current culture. These are values that characterize the way people within your organization currently behave. These are not necessarily what you would like, but are accurate descriptions of the way things really are*." Informants then sort 54 norm statements, such as "flexible," "sharing information freely," and "willingness to experiment," into nine categories ranging from "most characteristic" to "least characteristic" of their organization's culture. Using a Q-sort methodology, informants must implicitly compare each item to every other item and make decisions about those norms that are most and least rewarded, thus capturing not only the substance of the norms but also how relevant they are to the organization's culture (Block, 1978).

Unlike a Likert-format scoring scheme in which many or all items can be rated as high or low, this semi-idiographic approach forces respondents to choose norms that are most and least characteristic (Caldwell, Chatman, & O'Reilly, 2008). Ipsative scores are particularly useful to address the response bias likely to arise in Likert-type responses (e.g., Van Eijnatten, van der Ark, & Holloway, 2015) such as a lack of discrimination among items (e.g., scoring all the items on a 1–7 Likert-type scale as a "4"). Lee and Yu (2004) note that this ipsative approach "avoids imposing researcher generated typologies on respondents" (p. 343). Using the 54-item profile, the items can then be analyzed and the underlying factor structure of the firm's culture can be identified.

Informants' Q-sorted norms are used to construct a profile based on the pattern of norms that represent the culture of the firm (e.g., Ashkanasy et al., 2000).

Informants' individual culture profiles are then aggregated to form a profile that represents the overall culture of the unit or organization. Separate measures are then derived from the aggregated profile including the content of the culture (i.e., those norms/values deemed most and least characteristic), the consensus (i.e., the degree of agreement among the raters across the entire set of 54 norm statements), and the intensity of the norm, which is inferred from its relative rank (i.e., how strongly the informants feel about it based on where they place each item from most characteristic/desirable to most uncharacteristic/undesirable). Profiles can be generated to describe both the current culture of the unit and the desired culture, or the culture needed to successfully achieve the organization's goals, and the current and desired cultures can then be compared. The OCP has also been used extensively to assess person-group and person-organization fit (e.g., Adkins & Caldwell, 2004; Chatman, 1991; Elfenbein & O'Reilly, 2007; Judge & Cable, 1997; Kristof-Brown et al., 2005; Sheridan, 1992; Vandenberghe, 1999) and studies have shown that culture, as assessed using the OCP, is related to organizational performance (Chatman et al., 2014; Lee & Yu, 2004; O'Reilly et al., 2014).

Researchers have conducted a large number of studies using the OCP and high levels of reliability and validity of the instrument have consistently emerged (e.g., Chatman, 1991; Chatman & Jehn, 1994; Morrison, 1993; O'Reilly et al., 1991; O'Reilly et al., 2014; Sarros, Gray, Densten, & Cooper, 2005; Sheridan, 1992; Vandenberghe, 1999). One concern is that there is a pre-determined "socially desirable" ordering of the items (Arnold & Feldman, 1982). In particular, respondents may place items in categories according to how broadly appealing each item is rather than how much they judge it to be characteristic of their organization. This can be a significant problem with culture assessments since people often overstate the positive aspects of their job or organization to justify their ongoing commitment to it (e.g., Chatman, Bell, & Staw, 1986; Staw, McKechnie, & Puffer, 1983). The OCP mitigates this concern in three ways. First, using ipsative or relative rankings of the items reduces social desirability biases. Second, items in the OCP were developed to be evenly socially desirable (e.g., two items regarding rules are "being rule-oriented" and "not being constrained by many rules"). Third, the OCP was examined for social desirability bias. Specifically, Chatman (1991) reported that a group of organizational behavior Ph.D. students were asked to Q-sort the 54 items without reference to any particular organization but rather in general terms, into the nine categories, using as their anchors "most socially desirable" to "most socially undesirable." This social-desirability profile was then compared to actual firm culture profiles, and was not significantly correlated to them (median correlation = .18, n.s.). This suggests that organizational members did not appear to sort the OCP items in a way to make their firm look good.

Depending on the sample, the number of respondents, and the factoring method, the 54 items have been shown to cluster into five to eight independent dimensions (e.g., Marchand, Haines, & Dextras-Gauthier, 2013; Sarros et al., 2005; Tepeci & Bartlett, 2002). In a recent updating and validation of the instrument six dimensions emerged: (1) adaptiveness or innovation, (2) results-orientation, (3) detail-orientation, (4) collaboration or teamwork, (5) customer-orientation, and (6) integrity (Chatman et al., 2014; O'Reilly et al., 2014). Although there is some variation across methods and instruments, these dimensions appear to be consistent with those proposed by other researchers (Berson, Oreg, & Dvir, 2008; Borg, Groenen, Jehn, Bilsky, & Schwartz 2011; Detert, Schroeder, & Mauriel, 2000; Tsui, Wang, & Xin, 2006).

As with the other approaches to measuring organizational culture, the OCP can also be criticized on a number of grounds. First, although the authors' argue that they are measuring norms and values, they are measuring how similarly informants sort the 54 items into the 9 categories. Although the item set was developed expressly to focus on organizational norms as a primary manifestation of culture and the item set is large and intended to be comprehensive, there is no guarantee that the full universe of possible norm dimensions is being captured. For example, a careful ethnographic study might identify norms not assessed by the OCP.

A second issue is that, although the argument is made that those items ranked as 'most characteristic' or "least characteristic" reflect intensity—or members' willingness to sanction compliance or noncompliance—no actual measure of sanctioning is offered other than the respondents' ranking of items as highly rewarded. It is possible that norms characterized by OCP researchers as being intensely held may not actually be sanctioned. To the extent that this is true, the OCP would be more of a measure of informational social influence ("we agree that a norm exists") rather than normative influence ("noncompliance is sanctioned here").

Third, different factor structures have emerged in different studies. In some cases, this can partially be explained by updates in the item set (e.g., O'Reilly et al., 1991 compared to Chatman et al., 2014), but there appears to be at least some ambiguity about the underlying dimensionality of the tool. If different item sets and different samples result in the identification of different factors, then issue of construct validity remains questionable.

Fourth, the use of difference scores to compare aggregated culture profiles, such as those between the current and desired culture or among sub-units of an organization, has been criticized because of the potential that the reliabilities are overestimated (e.g., Meade, 2004). In a comprehensive review of the problems of difference scores, Edwards (1993, 1994) described how instruments like the OCP can provide ambiguous or misleading results by collapsing across dimensions (e.g., current versus needed) and obscuring the contributions of individual variables. For instance, a profile correlation of the type reported using the OCP assesses similarity in the shape of the profiles but not differences in magnitude among components. Thus, a high correlation could result from similar profiles even if there were large differences between factors. He also notes that ipsative scores violate normality assumptions required for parametric statistics. For example, when using a semi-idiographic or Q-sort

approach, the items are not completely independent from one another (e.g., the placement of the last of the 54 items is dependent on which categories the prior 53 were placed in). Although researchers have used a number of approaches to mitigate these weaknesses (e.g., Chatman, 1989; Edwards, 1994, 1995; Johns, 1981; Kenny, Albright, Malloy, & Kashy, 1994), some problems with the profile approach remain. That said, the OCP is the only instrument of the four major measurement tools that was explicitly designed to assess organizational culture in terms of shared norms based on normal (not dysfunctional) behavior in organizations.

3.4.5. Integrated critique of the four assessments

What can we learn from these different approaches? We offer three primary observations: First, the various instruments have been used to collect an enormous amount of data on the general topic of what is called "organizational culture." And, researchers have often provided impressive predictive validity for their measures (e.g., relating their measures to individual and organizational outcomes data like job satisfaction, commitment, and financial performance). They have also demonstrated the test-retest reliability of the measures, providing assurance that there is measurement consistency over time. What they have not done as well is to offer evidence of construct validity or to demonstrate that their measures are veridical assessments of the underlying concepts of any of the three layers (Schein, 2010) that characterize organizational culture. Unfortunately, absent a clear definition of the underlying construct, it is difficult to know what is being measured even though the measure itself has been shown to be reliable and to be correlated with organizational outcomes. We know the measure "works" in that it predicts some aspects of subjective and objective organizational behavior; we just don't know what it is really assessing. Researchers have either relied on idiosyncratic measures of culture with little validation (e.g., Berson et al., 2008; Hogan & Coote, 2014) or opted for easily accessible measures like the DOCS and OCAI that, while frequently used, have questionable construct validity. The results of these studies have demonstrated that "culture" and "culture fit" are clearly related to subjective measures of outcomes such as job satisfaction and perceived quality (e.g., Hartnell et al., 2011; Kristof-Brown et al., 2005) but are less clearly related to objective outcomes, especially at the organizational level of analysis. These findings are intriguing, but absent a common definition and validated measurement, it is often difficult to know what they mean.

Second, because different theoretical bases result in different conceptualizations, it is difficult to know how comparable the results are across studies. DOCS and OCAI look similar but use different labels. They confound norms with perceptions of structure, systems, and outcomes. One possible reason that studies show correlations with organizational effectiveness is that the DOCS and OCAI were originally designed to measure, not organizational culture, but organizational effectiveness. Are they really assessing culture as norms as are the OCI and the OCP?

Third, the DOCS, OCAI, and OCI approaches to measuring culture are based on a researcher-defined typology of culture—ranging from Jungian psychology (OCAI) to classifications of organizational effectiveness (DOCS) to human needs and leadership development (OCI). In each case, the authors begin with an underlying theory (e.g., organizational effectiveness or leadership development) and then base their instrument development on questions derived from the basic theory. The scores are then used to classify the organization into a particular type of culture (e.g., market-oriented, aggressive/defensive, mission oriented). It is questionable, however, whether these typologies either apply to all organizations or whether the categories capture the full range of possible cultures that could characterize a given organization, an unintended consequence, perhaps of Schein's dictum of being relevant to management. Instead of starting with the goal of understanding organizational culture per se, researchers have often started with what they wanted to predict – typically an organization's performance – and worked backward. This concern is reflected in several review papers on the subject (e.g., Hartnell et al., 2011; Schneider et al., 2013; Zohar & Hoffman, 2012). Even Denison et al. (2014) noted, "The proposition that culture types are orthogonal has not received empirical support (p. 10)." And, Hartnell et al. (2011, p. 687) in their review conclude that attempts to measure a dominant cultural type "may be of limited utility" because it does not reflect the full scope of possible culture dimensions. Jung et al. (2009) worry that the typological approach, despite being concise, runs the risk of stereotyping certain types of culture and imposing a researcher generated perspective in both identifying culture dimensions and determining how they are related to one another.

Thus, in spite of the large numbers of studies using these instruments, fundamental questions remain about what construct is being measured. In other words, organizational culture is under-theorized. Given the diversity of theories underlying the development of these widely used measures and the content of the items themselves, it is not surprising that the empirical evidence is often confusing or ambiguous. Although there is widespread acceptance of Schein's (1985) characterization of culture as having three layers, there has been little attention paid to what culture really is and how it operates—what the mechanism of action is and how this affects individual and organizational outcomes. Instead, the majority of studies have focused on demonstrating that culture (however conceptualized and measured) is related to individual or organizational outcomes.

Finally, we believe that the field should stop investing in the larger debates we discussed above for at least three reasons. First, as long as researchers begin with a common definition of culture (or climate), there is ample room to integrate both qualitative and quantitative research (e.g., Barsade & O'Neill, 2014). Second, we find the typology approach underlying three of the most used theories and measures of organizational culture (DOCS, OCAI, OCI) as well as the dimension-by-dimension approach that climate researchers employ to inadequately represent the construct of organizational culture. Third, making

progress requires a consistent definition of culture that permits researchers to study the phenomenon, accumulate knowledge, and collectively move the domain forward (Schein, 1996). We do not want to focus on promoting any particular instrument and believe that the field could make progress with competing instruments as long as researchers are measuring the same thing. Two possible ways to assure this are first, examining the convergent validity of the four major culture instruments, and second, developing a new measure that demonstrates construct validity with an agreed upon definition of organizational culture. Rather than simply looking for antecedents and consequents of culture, we need to explore the underlying mechanisms of action and explicate how culture is formed and transmitted, how it shapes attitudes and behaviors, and how it leads to important organizational outcomes. In the following section, we offer one such approach.

4. A comprehensive theory of culture

In spite of this lack of clarity, there is room for optimism. Although there has been a lack of overall consistency in defining and measuring culture, most researchers accept Schein's (1985) framework and agree that culture can be conceptualized at three basic levels: basic *assumptions* and *beliefs*, *norms* and *values*, and cultural *artifacts*. For example, Denison et al. (2014, p. 4) argue that the fundamental basis for organizational culture "includes the values, beliefs, and assumptions that are held by members of an organization and which facilitate shared meaning and guide behavior at varying levels of awareness." Cooke and Rousseau (1988, p. 245) define culture in terms of "behavioral norms and expectations." O'Reilly and Chatman (1996, p. 160) define culture as "a system of shared values (that define what is important) and norms that define appropriate attitudes and behaviors for organizational members (how to feel and behave)." They further note that norms and values are closely related, with norms specifying the appropriate attitudes and behaviors and values providing the rationale for these expectations (Parks & Guay, 2009). Thus, we argue that an appropriate starting point for a comprehensive theory of organizational culture is a focus on the norms that can act as a social control system in organizations. We believe this focus on cultural norms is appropriate both because norms translate into observable behaviors and attitudes, which are highly relevant for organizational psychologists and sociologists, and because informants can report on and articulate them, in contrast to the difficulty of surfacing underlying assumptions and beliefs, and the ambiguity of cultural artifacts.

4.1. The importance of culture in organizations

A fundamental task in organizing is to coordinate the activities of large numbers of people pursuing interdependent activities. To do this, organizations require control systems that define goals, assess variation from these, and provide feedback to individuals so they can adjust and coordinate their activities. One mechanism for achieving this coordination relies on formal control systems like performance management, product planning, and financial controls. Formal processes can assess variance against plans and generate formal feedback and incentive systems to ensure compliance. But, while sometimes effective, these systems have limitations in how extensively they can be used and their motivational effects (O'Reilly & Chatman, 1996).

A second and perhaps more powerful way of controlling behavior relies on social controls that operate through norms or social expectations about appropriate attitudes and behaviors. Indeed, a basic condition for organizations to exist is that members accept the norm of deference to authority whether based on formal hierarchical position, expertise, network position or other more informal bases of leadership and status. Without an acceptance of this norm, decisions by those with more power would be resisted and coordination and hierarchical control would not be possible. Although there is a long and rich tradition of research demonstrating how powerfully norms can affect behavior and attitudes (e.g., Asch, 1951; Newcomb, 1963; Sherif, 1936), researchers have largely concentrated their efforts on examining subtle and indirect influence processes and ignored more direct organizational effects (Cialdini & Goldstein, 2004). Yet there is compelling evidence showing how normative influence affects outcomes ranging from health risks like smoking, drug use and eating (e.g., Miller & Prentice, 2016), conservation behaviors like energy use, littering and environmental protection (e.g., Schultz, Khazian, & Zaleski, 2008; Terrier & Marfaing, 2015), the expression of political views and prejudice (e.g., Crandall, Eshleman, & O'Brien, 2002), consumer behavior (Burnkrant & Cousineau, 1975), the use of social media (Cheung, Chiu, & Lee, 2011), and even organizational citizenship behaviors (Ehrhart & Naumann, 2004). While the effects of normative influence are pervasive, Cialdini notes, "As a rule, people grossly underestimate the guiding role [that norms play in affecting behavior]" (Cialdini, 2005, p. 158).

4.2. Culture in operation

If culture, acting as a social control system to coordinate peoples' behaviors, is manifest as norms, then the next question is, how do norms operate? What is the mechanism of action that regulates attitudes and behavior within collectives? A rich stream of research explicates this process. Deutsch and Gerard's (1955) seminal work identified two related ways that norms operate: (1) informational social influence or descriptive norms, and (2) normative social influence or injunctive norms. With descriptive norms, people look to others for information about how to act and feel in a given situation, especially if the situation is ambiguous or new to them. When others are behaving consistently, it signals that this is the appropriate or correct behavior. For example, Jacobs and Campbell (1961) demonstrated that erroneous judgments about the autokinetic effect could be sustained in groups as new entrants joined and accepted the previous estimates as correct. Numerous other studies have demonstrated how consistent information about how to behave and feel

can powerfully shape behavior and beliefs (e.g., Cialdini & Trost, 1998; Morris, Hong, Chiu, & Liu, 2015), and reduce uncertainty and unpredictability (e.g., Goncalo, Chatman, Duguid, & Kennedy, 2015).

In addition to the simple informational influence derived from descriptive norms, a second way that norms affect attitudes and behavior is through the social approval and disapproval attached to complying with expected patterns of behavior. Beyond conveying the information that certain behaviors are common, injunctive norms highlight the connection between compliance with these behaviors and the group's approval. People comply as a way of fitting in to the group because, as interdependent beings, they ultimately cannot risk being rejected or alienated from the group (e.g., Richerson & Boyd, 2005; Wilson & Wilson, 2007). Group-defined expectations about appropriate attitudes and behavior provide group members with a sense of acceptance and positive identity (Abrams & Hogg, 2001; Smith & Louis, 2008), and importantly, they help people avoid being sanctioned for a failure to adhere to norms. In the organizational context, failure to comply with group expectations can result in losing status, being isolated, and even being ejected from the group (Roos, Gelfand, & Lun, 2015). Thus, the mechanisms by which norms affect behavior are well understood. In the face of information suggesting how one needs to behave (descriptive norms), and with approval and disapproval contingent on compliance (injunctive norms), people must choose to comply and be accepted and reinforced or not comply and face social disapproval and possible rejection. As such, normative social influence is a powerful form of social control. In this way, the processes of social influence, compliance and conformity are the foundations for understanding organizational culture.

4.3. Distinguishing among culture content, intensity and consensus

Understanding the basis of organizational culture as the degree of compliance with social norms requires a complete understanding of norms as complex constructs. Recently, Chatman et al. (2014) linked normative social influence to three key aspects of organizational culture. They noted that people are more likely to comply with cultural norms when three conditions are met: (1) normative expectations are salient, meaning that the *content* of the norms are clearly defined in behavioral terms; (2) there is great *consensus* or agreement among members of the group across a broad set of norms, meaning that norms are widely shared; and (3) group members are willing to sanction others for non-compliance and reward them for compliance, meaning that there is *intensity* about the norm.

Theoretical debates about cultural norms have often involved disagreements primarily about norm content and have either made assumptions about norm intensity and agreement or ignored them altogether to the point that Harrison and Carroll (2006, p. 9) concluded that "criticisms of the culture concept commonly consist of criticisms of the content approach, especially its emphasis on shared content." The shared nature of cultural norms makes it difficult to separate agreement and intensity about norms from the substance of the norms. For example, is non-uniform behavior among members a sign of an organizational culture with high consensus about individuality and innovation or does it represent a weak culture in which no one agrees about how to behave? As a result, culture research has frequently confounded a norm's content with its intensity and consensus. Superficially, the very idea of identifying culture in terms of its content presumes that a consensus exists among members of the organization; that is, the cultural norms are viewed similarly enough among members that they can be accurately represented as a single agreed-upon profile. Further, most definitions of organizational culture imply that cultures in which members do not agree about norms cannot be aggregated or represented in unified terms and may only be amenable to broader content descriptions such as "the culture is fragmented" (Martin, 1992). Despite this confusion, we suggest that it is possible and necessary to separate the norm components to fully understand organizational culture and how it operates as an informational and normative social control system within organizations.

4.3.1. Conceptualizing culture strength: agreement and intensity

As we discussed earlier, a psychological perspective has typically defined climate strength in terms of the degree of dispersion among raters in judgments about a specific organizational characteristic (Schneider, Salvaggio, & Subirats, 2002). In doing this, researchers have usually focused on one or two dimensions such as orientation toward customer service, or safety (Luria, 2008). Psychologists have typically measured climate strength as the inverse of the variance in questionnaire responses across work groups within companies (Lindell & Brandt, 2000). This approach equates climate strength with the extent to which members agree about a particular characteristic of their organization and, while it usefully reflects consensus versus deviance, it also suffers from two shortcomings. First, it neglects to consider intensity, or how willing members are to sanction norm violators (Jackson, 1966; Trice & Beyer, 1993). A norm could, for example, be agreed upon but not intensely held (e.g., Boisnier & Chatman, 2003; O'Reilly, 1989). Second, it also fails to consider the presence of multiple norms and their collective impact on behavior.

In contrast to psychologists' emphasis on consensus around a particular aspect of climate, organizational researchers have defined culture strength in terms of what we define as norm intensity, and downplayed consensus and content (e.g., Kotter & Heskett, 1992; Burt et al., 1994; Sorensen, 2002). For example, Sørensen used Kotter and Heskett's (1992) data, assessing what he called the strength of the corporate culture (Sorensen, 2002, p. 77), which was based, as described earlier in this paper, on outsider's average perceptions of the extent to which a company had a common style, a credo, and longstanding practices. Clearly this is not a measure of the content of the culture, and as Sorensen (2002, p. 78) noted, "This culture strength variable does not directly measure the extent to which there is consensus within the firm . . . " The measure, instead, appears more akin to intensity, though

these three attributes are likely influenced by both intensity and consensus together.

More recently, cross-cultural researchers have offered theoretical and empirical evidence of a construct that is similar to notions of culture intensity, identified as a national cultures' position on a continuum of looseness to tightness (Gelfand, Nishii, & Raver, 2006). Cultures that are tight have many intense norms and a low tolerance for deviant behavior, while loose national cultures have weak social norms and a high tolerance for norm deviation (Gelfand, 2012, p. 420), implying the relevance, particularly, of intensely held norms. Gelfand et al. (2011) conducted a 33-nation study and found that the tightness or looseness of a nation's norms was related to a variety of ecological and historical conditions. For example, countries that were more susceptible to resource scarcity and natural disaster tended to have tighter norms. Tightness was manifested in a wide range of social, legal and political institutions; even clocks were more likely to be on time in tight nations. Our notion of norm intensity is conceptually comparable to this tightness-looseness continuum, albeit as applied to organizations rather than nations.

Considered together, these three research streams, the psychological approach, the organizational approach, and the cross cultural approach, highlight the importance of two distinct components of norm strength: agreement and intensity. We therefore differentiate among culture *content* (the substance of the cultural norm), *intensity* (the force with which cultural norms are held), and *consensus* (the extent to which members agree broadly about an organization's system of cultural norms). Further, we suggest that systematically parsing cultural norms into its component parts and then considering them simultaneously may add precision and focus to organizational culture research.

4.3.2. The joint effects of culture content, consensus, and intensity

When simultaneously considering norm agreement, intensity, and content, it is critical to include attributes that characterize the organization in appropriately comprehensive and relevant terms (Chatman, 1989). Focusing only on agreement about one norm can lead to errors in estimating how much culture consensus actually exists across multiple relevant norms (Schneider et al., 2013). This is important because an organization characterized by high consensus and intensity on one norm but low consensus on all others may be quite different than one in which members agree about a comprehensive set of intensely held norms that characterize their organization (Caldwell et al., 2008). For example, members might be more likely to align their behavior around a single shared norm if there was general consensus across a set of norms because such consensus is also associated with higher commitment to the organization (O'Reilly & Chatman, 1986) and cohesion among members (Reagans & McEvily, 2003). Further, members who agree on a system of norms may be more likely to sanction norm violators, particularly when they violate the norms that are most intensely held, compared to organizations in which consensus is lower (Boisnier & Chatman, 2003; Gelfand et al., 2006).

We consider a culture to be strongest when organizational members share a common set of expectations about appropriate or inappropriate attitudes and behaviors (norm content) *and* these are consistently shared and reinforced across divisions and management levels (O'Reilly, Caldwell, Chatman, Lapiz, & Self, 2010). In some organizations, members exhibit consensus about norms but no intensity. For example, an organization in which members understand what top management values but attach no strong approval or disapproval to these beliefs or behaviors can be characterized as having high consensus but low intensity, or a vacuous culture. Alternatively, an organization may exhibit high intensity but no consensus such that some sub-groups care deeply about certain norms that are different from those that are intensely held by other sub-groups. For example, a given norm, such as being detail-oriented, can be positively valued in one group (e.g., manufacturing or accounting) and negatively valued in another (e.g., R&D or strategic planning). Such cultures can be characterized as "warring factions." A failure to share the central norms or to consistenly reinforce them may lead to vacuous norms, conflicting interpretations, or to micro-cultures that exist only within subunits.

Finally, consensus can be assessed without any consideration of the content of the organization's norms. Thus, the degree to which a norm is widely shared can be considered separately from its content. By definition, norms that are intensely held are likely to emerge as highly salient and identity defining. Thus, cultures get stronger as both intensity and broader consensus about the relative importance and unimportance of a comprehensive set of norms increase.

Parsing cultural norms improves on previous research in two ways. First, compared to research that only considers one or two attributes that are presumed to be stronger or more relevant than other norms, or research that looks only at norm strength without specifying its content, this approach advocates substantive, content aspects of norms along with separate measures of their levels of agreement and intensity. Consensus about the arrangement of a comprehensive set of culture norms is a way of assessing an organization's uniquely patterned culture, much like how personality research assesses the "whole person" in terms of the unique organization of their traits (Weiss & Adler, 1984). In this case, we advocate capturing the "whole culture."

Second, this theory also offers insight both about why it has been so difficult to link strong culture and financial performance and also how culture research can progress by building our understanding about a variety of norm content/strength combinations. A significant issue in understanding culture lies in how behavioral inconsistency within an organization is interpreted. Sorensen (2002) suggested that organizations with "stronger" cultures had more internal behavioral consistency. He also showed that firms with stronger cultures operating in stable competitive environments generated more reliable (less variable) performance, but that this reliability disappeared for strong culture organizations competing in volatile environments. One problem with this formulation is that

behavioral consistency as an indicator of a strong culture, or more importantly, behavioral inconsistency as an indicator of a weak culture, is too simplistic. Behavioral inconsistency can actually arise from two sources. One possibility is that members exhibit behavioral inconsistency because those within their organizational culture disagree about norms that characterize the firm (e.g., consensus is low). A second possibility, however, is that behavioral inconsistency arises because members agree strongly on norms that promote such inconsistencies—norms like a willingness to experiment, being flexible, and taking advantage of new opportunities. In this case, consensus around a set of norms is high, but those norms dictate behavior that varies across members. Differentiating between these two paths to behavioral inconsistency is essential; failing to do so lumps together firms that have strong and weak cultures obscuring the relationship between culture and performance (e.g., Chatman et al., 2014). Parsing norms makes it possible to examine norm intensity in the context of high and low levels of culture consensus.

4.3.3. Parsing norms to understand their nuanced behavioral manifestations

4.3.3.1. Collectivism. Collectivism is characterized by a focus on shared objectives, interchangeable interests, and commonalities among in-group members (Triandis, 1995). Even though collectivism has been examined primarily at the national culture level (e.g., Shteynberg, Gelfand, & Kim, 2009), it transcends levels of analysis and is relevant to organizations and groups as well (e.g., Brewer & Chen, 2007; Hofstede & Hofstede, 2001). Recent research suggests that collectivism at the group or organizational level can be understood as a social norm (Jetten, Postmes, & McAuliffe, 2002), or a widely held belief regarding the appropriateness of behaviors pertaining to collectivism, such as a concern for maintaining harmony and commitment to shared goals (Cialdini, Reno, & Kallgren, 1990). Studies of situations in which personal and social norms conflict find that people's public behavior is often determined more by their perception of the organization's social norms pertaining to collectivism than by their personal norms (Morris et al., 2015, p. 5).

Examining the collectivism norm illustrates one of the advantages of parsing norms by showing how behavioral manifestations of a norm can vary depending on how intensely held the norm is. At a moderate level of intensity, norms focusing on group collectivism encourage members to engage in cooperative behavior with one another (Jackson, Colquitt, Wesson, & Zapata-Phelan, 2006). But as collectivism increases in intensity, it will also influence members' commitment to and identification with the group (e.g., Chatman & O'Reilly, 1986). At high levels of intensity, a collectivistic orientation increases members' feelings of being interchangeable exemplars or prototypical members of the group (Hogg & Terry 2000; Roos et al., 2015) by reducing the salience of differences and increasing the salience of the focal group's identity (Chatman, Sherman, & Doerr, 2016).

Interestingly, at the highest levels of intensity, the cultural norm of collectivism can translate into behaviors that appear uncooperative because members feel more obligated to do whatever is in the group's collective interests (Marcus & Le, 2013), even if it means disagreeing with one another. In other words, it is possible that organizations in which a norm of collectivism is intensely held will demonstrate a strong collective identity and high levels of commitment but also high levels of conflict, rather than cooperation among members, a combination that has been considered in cross cultural research on collectivism (e.g., Brewer & Chen, 2007; Fiske, 2002), and is exemplified by companies like Cypress Semiconductor and Intel (e.g., Grove, 1996; O'Reilly & Caldwell, 2012). Again, the point is that greater accuracy in interpreting an organization's culture and understanding why members are behaving as they are is derived by parsing cultural norms according to their content and strength.

4.3.3.2. Looseness-tightness. A second example is looseness-tightness, which has been examined at the national culture level and as a characteristic pertaining to how much consensus exists in a culture (e.g., Gelfand, 2012). Looseness-tightness could, however, also pertain to specific behaviors such as the extent to which members emphasize being easy going versus inflexible. Again, the norm has properties, dictating how aligned with the group people are expected to be, as well as specific implications for the behaviors they need to emphasize. And, again without parsing strength and substance, assessments of the culture might be misleading. For example, a culture that is easy going could be mistaken as being necessarily loose, when in fact, high levels of uniformity in behavior and outlook exist—an otherwise strong culture. Organizations like Google and Patagonia (Paumgarten, 2016) emphasize levels of employee flexibility that can seem to an observer to suggest a lack of a strong culture when, in fact, the lack of uniformity stems from strong norms about individual freedom of expression. Parsing norms into content, agreement, and intensity is particularly important when the behavioral manifestations of those norms might appear inconsistent and can prevent confounding "strength" of the culture with its content. We recommend pursuing this approach programmatically to generate a differentiated picture of intense norms that may promote versus constrain financial performance when culture consensus is high versus low. We offer additional suggestions about evolving organizational culture research below.

5. An agenda for future organizational culture research

After more than 4600 studies of culture, what do we know with confidence and what questions should future research address? Several trends are apparent. First, as suggested earlier, we need to move past the definitional fog that currently characterizes research on organizational culture. Absent some clarity about the construct itself and assessments of culture that convincingly demonstrate construct validity, the field may simply continue to proliferate studies labeled as "culture" that represent a

hodge-podge of constructs and fail to aggregate into a coherent body of knowledge about how culture operates and what its effects on organizations are.

Even though most researchers accept Schein's conception of culture as manifest at three levels, this consensus has not been translated into a consistent theoretical framework or validated measures. From a functionalist perspective, we suggest that research focus more narrowly on culture as the norms and values that guide behavior within organizations and act as a social control system. There is a long and productive tradition of research on norms that can provide a solid foundation for this research (Cialdini & Trost, 1998; Miller & Prentice, 2016). By decomposing norms into content, consensus, and intensity, research may be able to explore in a nuanced way how norms operate within organizations and affect individual and organizational outcomes as well as where and how these norms emerge and change over time. Below we discuss some ways in which to advance the domain of organizational culture.

5.1. Relating culture to individual and organizational performance

There is already substantial evidence that the congruence of personal norms and values with those of groups and organizations predicts individual outcomes such as attraction, employee attitudes, and turnover (e.g., Piasentin & Chapman, 2006; Kristof-Brown et al., 2005). These studies of person-organization and person-group fit have been remarkably consistent in showing the positive effects of value congruence. What is less clear is how culture influences organizational outcomes. Although there is some evidence that culture, however defined, is related to subjective perceptions of organizational performance such as safety, quality, and innovation, we have less confidence in how culture might affect more objective performance indicators. Part of the reason for this, holding aside construct and measurement issues, is that studies of this sort require large samples that permit cross-organizational comparisons that can control for confounds like organizational size, industry variations, prior performance, and differences in strategies. Current measurement options that require members of an organization to complete surveys makes it difficult to collect data from large samples of firms. Fortunately, recent advances in the use of natural language processing and large web-based data sets offer promising ways to address these issues.

Several studies have begun to use these techniques to explore how culture might affect organizational performance and how it is developed and changed. For instance, Popadak (2015) used automated text analysis and data from three web sites that collected large samples of data. The data represented 4600 firms over a 10-year period, including reviews by more than 1.8 million employees and 400 million words to construct measures of norms and values consistent with those identified by O'Reilly et al. (2014). She found that variations in corporate governance affected the culture of the firm and that culture, in turn, was associated with performance, with cultures lower in dimensions like customer service experiencing a 1.4% decline in firm value. Similarly, Moniz (2015) collected data from 417,000 employee reviews of 2300 firms from 2008 to 2015 on Glassdoor.com. He found that firm value increased among organizations whose culture was aligned to their strategic goals. Using data from the Great Place to Work survey, Guiso, Sapienza, and Zingales (2015) have shown that a firm's stated values are not related to firm performance, but a culture that emphasizes integrity is associated with subsequent performance.

Similarly, Srivastava and his colleagues (Srivastava et al., in press; Goldberg, Srivastava, Manian, Monroe, & Potts, in press) have considered comparisons of sender and recipient language in emails as a measure of what they refer to as "cultural assimilation." Language has often been viewed as an artifact of culture (e.g., Kramsch, 1998; Lazear, 1999; Schein, 1985). Srivastava et al. (in press) examined 10.25 million email exchanges for 601 employees over five years. They found that lexical fit, defined in terms of similarity of sender and receiver language in emails, is associated with promotions and retention for individuals who are not tightly embedded in sociometric networks. This approach has generated results that are consistent with decades of similar work (Chatman, 1991; Kristof-Brown et al., 2005; O'Reilly et al., 1991; Schneider et al., 2013), but also offers an opportunity to examine more fine-grained research questions such as when members of a particular organization begin to fit in, what the lexical markers are of disengagement, what the leading language markers of culture change are, and whether rates of culture change vary across organizations and industries.

On the other hand, we still do not know whether lexical fit is linked to underlying norms and values, the primary definers of organizational culture, leaving some questions about the construct validity when using lexical similarity as a measure of "cultural assimilation." It is certainly possible that language similarity could reflect assimilation to organizational norms and values, but lexical fit could also reflect many other things, from groupings based on speaking English as a second language, to shared technical backgrounds, to comparable tenure in the organization. Thus, while lexical similarity could reflect person-culture fit, it might also not. Interestingly, in-progress research is showing that lexical fit does correlate with the fit between an employee's perception of their organization's culture as measured by the OCP, offering further validation of the OCP and some support for the use of lexical fit as a manifestation of culture (Lu, Chatman, Goldberg, & Srivastava, 2016). Thus, these large-scale methods, even if they simply confirm older findings, may offer intriguing possibilities for non-obtrusively assessing and validating culture.

Other researchers have also begun to use similar Big Data techniques to assess personality and its effects on employee and organizational outcomes (e.g., Gow, Kaplan, Larcker, & Zakolyukina, 2016; Kosinski, Stillwell, & Graepel, 2013). What is promising about these studies is the ability to collect large sample longitudinal data across firms and industries. Data of this type can allow culture researchers to do the fine-grained, large sample tests necessary to unpack the effects of culture on organizational performance. The ability to reliably assess personality can help

culture researchers examine the effects of CEOs on shaping and changing culture, a topic that is logically important but relatively unexplored.

Researchers have also developed simulation techniques to advance culture theory while overcoming the limitations of collecting culture data more obtrusively. Simulations are advantageous because they enable precise and controlled variation in key attributes related to culture, and thus can offer insight into how culture interacts with various organizational processes and under various conditions (Harrison, Lin, Carroll, & Carley, 2007). For example, Carroll and Harrison designed computer simulations of how culture is transmitted and changes as a function of various organizational events such as employee entries, exits, promotions, and leadership shifts (Harrison & Carroll, 1991; Carroll & Harrison, 1998). They have also examined how each member's level of enculturation influences and is influenced by every other members' level under cohort based and random influence conditions, showing in this "virtual experiment" that cohort based influence promotes greater cultural stability even as employees enter and exit a firm (Harrison & Carroll, 2002). Simulations have been used to study mergers, and show that, in addition to focusing on the content of merging cultures, successful merger integration is also significantly influenced by personnel flows such as the frequency with which members enter and exit an organization, as well as the intensity with which employees are socialized (Carroll & Harrison, 2002). Thus, simulation approaches can enable a greater understanding of how culture is influenced by and influences complex and simultaneous organizational dynamics.

Finally, economists have developed modeling approaches that enable a better understanding of how culture operates using formal theory. For example, Cremer (1986) has examined how an organization's culture comprises its reputation, affecting how it interacts with and is viewed by various stakeholders. Hermalin (2001) has made theoretical headway in understanding precisely how culture can bolster a leader's influence in leading by example (Hermalin, 1998) or using jargon (Hermalin, 2013). And, Lazear (1999) has emphasized how culture arises and is transmitted. This theoretical modeling approach has some of the same advantages of simulations, including enabling a precise specification of variables that are difficult to identify and examine at systematically varying levels, and using a highly methodical approach to understand the mechanisms underlying culture and the relationship between culture and other organizational processes. Both approaches – simulations and theoretical modeling – should, of course, be used in conjunction with field studies that can both provide insight into the relevant variables to model and verify that model assumptions are externally valid (e.g., Chatman & Flynn, 2003).

5.2. Culture and strategy

If the normative order of an organization acts as a social control system, then an immediate question is whether this social control system is congruent or consistent with the objectives the organization is trying to achieve; that is, is the culture aligned with the strategy? Just as different strategies may require different metrics and formal control systems, it also follows that different strategies may be advantaged or disadvantaged by different cultures. For instance, a firm that pursues a low-cost strategy may benefit from a culture in which efficiency and cost reduction are emphasized through attention to detail and a focus on results. The same culture in a firm that relies on innovation as a strategic advantage could result in less flexibility and risk taking. Similarly, a firm whose strategy requires high levels of cross-functional interdependence to deliver products and services might require a culture of collaboration that would not add value in a highly decentralized firm where performance relies on pooled-interdependence of aggregated individual performance (Thompson, 1967).

There is convincing evidence that different cultures exist both across industries and firms (e.g., Chatman & Jehn, 1994; Christensen & Gordon, 1999) and some evidence that aligning strategy and culture may be important for organizational performance. In studying 26 Israeli companies, Berson et al. (2008) found that innovative cultures were associated with higher sales growth while bureaucratic cultures were more efficient. Chatman et al. (2014) studied the high technology industry and found that firms whose cultures emphasized a willingness to experiment and being quick to take advantage of opportunities and also had high agreement about the relative importance of a large set of cultural norms had higher financial growth over time. Kotrba et al. (2012) similarly observed that the interaction of different cultural traits predicted performance—specifically that adaptability, consistency, and involvement predicted sales growth and market-to-book value.

A promising avenue for studies of culture-strategy interaction is suggested by what is known as the "configurational approach" (e.g., Ketchen, Thomas, & Snow, 1993; Meyer, Tsui, & Hinings, 1993). A configurational or profile approach represents a bundle of variables considered together and considers the interactions among them. In their review of this approach, Ostroff and Schulte (2014) note that although culture is a multidimensional construct, studies have not taken into account the potentially complex interactions among multiple cultural dimensions that operate together as a system, but have instead focused on the independent effects of cultural dimensions. "These approaches miss the interactions and interdependencies among the aspects or dimensions" (Ostroff & Schhulte, 2014, p. 17). For instance, an organization with a strong culture that is characterized by an emphasis on taking risks, collaboration and a people-orientation is a different place than one that emphasizes taking risks and a results-orientation, but has no concern for people. The former is likely to emphasize a joint approach to innovation and a longer-term perspective while the latter is more focused on short-term individual innovation. Using a profile model permits researchers to consider pairings of different cultural dimensions and examine how they are related to different effectiveness outcomes. This approach has shown promise in linking variations in structure and climate to organizational performance (Fiss, 2011; Schulte, Ostroff, Shmulyian, & Kinicki, 2009).

6. Conclusions

Organizational culture research, while widely explored, has been based on different definitions of the construct, drawn on different theories, and used different measures. We suggest that the future of the paradigm lies in integrating knowledge to develop a robust and comprehensive theory of organizational culture, one that identifies the psychological mechanisms that affect individual and organizational behavior and that leverages the empirical value of newer technological approaches to examining the dynamics of culture over time. This should include more careful attention to construct validity and measurement issues. Although this conclusion may feel pedestrian, without it we run the risk of continuing to amass studies of "culture" that fail to aggregate. In this pursuit, culture researchers need to hold each other accountable for theoretical precision in defining, empirically validating, and articulating a theory of culture; where it comes from, and how it operates. At the same time, as with any research domain, it will also be useful to inspire new generations of organizational culture researchers, who can take advantage of new data, new models, new technologies and unexpected empirical discoveries, to reinvigorate our study of organizational culture.

It may also be useful to identify the most critical culture problems—perhaps a "Big 3" of culture problems, and work paradigmatically to solve them (e.g., Pfeffer, 1993). From our vantage point, possibilities include: (1) A continued exploration of the links between culture, leadership, organizational structure and performance, (2) documenting how organizations can cultivate, manage and maintain organizations with two or more highly divergent, or ambidextrous subcultures including how subcultures can be used to promote innovation and change (Boisnier & Chatman, 2003; Martin & Siehl, 1983; O'Reilly & Tushman, 2016), and (3) identifying the major enablers and obstacles to changing culture, including an understanding of the effects of person-culture fit, employee churn, and culture transmission. In pursuing such "big" questions, we believe that culture researchers should consider engaging in more full cycle research (Chatman & Flynn, 2003), using the full spectrum of research methodologies, including laboratory and field experiments, surveys, regression discontinuity analyses, simulations, and the creative use of archival data.

In spite of our critical analysis, we conclude our review of organizational culture on an optimistic note. First, both researchers and managers acknowledge the importance of organizational culture. Culture is perhaps the most distinctly organizational of the domains that the field of organizational behavior endeavors to study and thus is centrally relevant. Cultural norms are key mechanisms of social action; they cross levels of analysis and are deeply embedded in the fields that intersect most closely with our field—psychology, sociology, and economics. Culture influences organizations, their performance, identity, and reputation, and can determine the well-being of their members. As Schein (2010, p. 2) observed in the beginning of his seminal 1985 book, the management of culture is "the only thing of real importance that leaders do." As a subject, culture thus remains of central importance in understanding how organizations function. As such, it offers the promise that high quality research can be translated into useful applied practice. Second, although we have been critical of some aspects of how culture has been studied, researchers have nevertheless amassed convincing evidence that culture can have significant positive and negative effects on individual and organizational outcomes, including employee fit, job satisfaction, commitment and turnover as well as important organizational outcomes such as customer satisfaction, product quality, and organizational financial performance. This considerable body of research can provide a strong platform for future researchers to build on. Improving both the conceptual foundations and measurement of culture seems quite feasible, especially as our ability to access large data sets is increased. Our hope is that by identifying weaknesses in the current research and in suggesting new directions, including diverse methodological approaches to compensate for the inherent weaknesses in any single approach, we might inspire new students and young faculty to study organizational culture in ways that accumulate comparable and conceptually valid knowledge. If this happens, we will finally advance our understanding of organizational culture as a paradigm.

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