

DISSERTATION

INDIVIDUAL PERCEPTIONS OF CULTURE AND CHANGE: A UNIFYING  
PERSPECTIVE ON CHANGE-ORIENTED ORGANIZATIONAL CULTURES

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## ABSTRACT

### INDIVIDUAL PERCEPTIONS OF CULTURE AND CHANGE: A UNIFYING PERSPECTIVE ON CHANGE-ORIENTED ORGANIZATIONAL CULTURES

Organizational change has become a mainstay for today's organizations. Yet, organizational change efforts overwhelmingly represent unsuccessful and stressful events for both organizations and employees. Much of the extant literature on organizational change focuses on a modified culture as an outcome of change, but this ignores the potential for organizational culture itself to facilitate organizational change efforts by engendering an inherent value for organizational change in employees before changes even happen. I propose that one potential solution to unsuccessful change efforts is for organizations to adopt a change-oriented culture, making change acceptable rather than an obstacle to overcome. Because a changed culture is the typical change outcome, existing organizational culture frameworks are broad and therefore address organizational change (e.g., *adaptive culture* in the competing values framework, or learning organizations) in a cursory manner. Furthermore, these broad frameworks were developed in parallel yet isolated streams of research; hence, their value for predicting organizational change outcomes is limited. Therefore, to address failing organizational change efforts and disjointed culture frameworks, I synthesize the facets of existing organizational culture frameworks that focus on change to create and define a change-oriented culture. Data from multiple samples of a total of 963 Amazon's Mechanical Turk workers were used to test the psychometric properties of a new measure of change-oriented organizational culture. Structural equation modeling was used to assess the relationship of change-oriented

organizational culture to its nomological network above and beyond existing cultural frameworks. Results from structural equation modeling indicated that change-oriented culture directly relates to organizational change attitudes, turnover intentions, and organizational commitment; indirectly relates to change-related behaviors through readiness for change; and indirectly relates to perceptions of change success through resistance to change. Moreover, change-oriented organizational culture related to change-related attitudes and organizationally relevant outcomes significantly better than the adhocracy dimension of the competing values framework, the innovative dimension of Wallach's organizational culture measure, and perceptions of learning organizational culture. However, both change-oriented organizational culture and perceptions of learning organizational culture related to affective commitment to change and organizational commitment equally well. This study advances the organizational culture literature by proposing a new theoretical orientation to change – that the culture can facilitate change efforts rather than simply serve as an outcome of change interventions – and furthermore, provides a first attempt at defining and collecting empirical data to support the validity of a change-oriented culture dimension.

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## DEDICATION

*This dissertation is dedicated to my wife, Alison. You have been my rock and have meant everything to me throughout graduate school. Thank you for helping me at every step of the way.*

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## Introduction

“In their proximal environments, organizations are facing increasing competition, fast-changing consumer tastes and preferences, growing threats to their customer niches, and a geographically broadening supplier base. It is no surprise, then, that clichés such as “change is the only constant” and “to stop changing is to fall behind” resonate more than ever with managers and employees” (Martins, 2011, p. 691). Since this statement was written, the trajectory of the omnipresence of organizational change – managerial-driven, as well as naturally occurring differences in employees, the work context, or work itself as it affects organizations - (Deloitte, 2017; Martins) has only steepened. For example, think of ordering an Uber using your iPhone this afternoon; imagine how different this action would have been only three or four years ago. The idea of taxi companies having to compete with strangers giving each other rides would have been ludicrous, yet now companies like Uber and Lyft are ubiquitous, legitimate, and formidable competitors to traditional taxi companies, forcing them into rapid organizational change.

However, organizational change efforts, as a whole, are still unsuccessful more often than not (Al-Haddad & Kotnour, 2015) with estimates indicating that the failure rate may be close to 70% (McKinsey, 2015). Thus, despite decades of research generating a large body of literature on change processes (e.g., Van de Ven & Poole, 1995), differing characteristics of change (e.g., Weick & Quinn, 1999), and change methodologies (e.g., Kotter, 1996), substantive change effects often appear fleeting or even non-existent. Further, statistics on change success (such as the 70% failure rate; McKinsey) tend to be based on short-term planned changes. If these micro-level changes (e.g., technology; Davis, 1989) in short periods are fraught with difficulties, imagine the challenge with macro-level changes, such as structure and culture, over long periods.

Consequently, scholars have claimed organizations that can deftly navigate this ever-changing marketplace - where, with increasing frequency, organizational change is a must (Burke, 2008) - have a competitive advantage over their more clumsy counterparts (Watkins & Marsick, 1993).

In an era where change has become the norm (Al-Haddad & Kotnour, 2015), being able to make change happen that is quick, successful, and consistently sustained is essential for an organization's survival. Yet, current approaches to understanding and facilitating change seem to be missing some component, as incidences of organizational change targeting organizational culture still involve stories fraught with major difficulty, if not complete failure (e.g., Gover, Halinski & Duxbury, 2016; Schein, 2004). In this project, I offer a new approach to understanding and facilitating continuous change - or at least omnipresent episodic changes – that considers missing components that may contribute to explanations for why change fails more often than succeeds and could enhance the success rate of organizational change.

I propose that instead of looking at organizational culture as the change target, culture should be a change facilitator. I propose there exists a cultural dimension called *change-orientation* that subsists in all cultures, whereby the amount or level of this dimension determines the ongoing readiness of workers and the organization as a whole for change efforts. What I propose is not entirely new, in and of itself, but rather a novel integration and merging of different research streams that heretofore have been parallel yet separate to create a new dimension to culture that facilitates change. Several streams of research within the organizational culture and organizational change domains have developed independently focusing on different taxonomies of culture depending on their foundational literature (e.g., economics, business, psychology). These independent efforts have led to a substantial amount of research and explication about culture and change within given theoretical frameworks. For example, both the

competing values framework (CVF; Quinn & McGrath, 1985) and Denison's four quadrants of culture (Denison & Neale, 2000), which are well-known organizational culture frameworks, include a component related to adaptability and change; however, neither orientation has leveraged the other to develop an actual dimension of change-orientation or a means of integrating the perspectives of culture and change. As such, there exists a vast amount of literature on organizational cultures with facets focused on valuing change, yet no unifying framework that brings this value of change together. Additionally, though the frameworks include some aspect of change, none focus on the potential for this facet to facilitate organizational change interventions. Thus, although a facet of adaptability is already present to a degree in multiple frameworks (e.g., O'Reilly, Chatman, & Caldwell, 1991), such as in dimensions of Denison's culture model (Denison & Neale), CVF (Quinn & McGrath, 1985), the Organizational Culture Profile (O'Reilly et al., 1991), and is a predominant feature of learning organizations (Senge, 1990), there is little explanation for what role this facet plays in and across the many organizational culture models. It simply exists to be measured. In congruence with literature on ethical culture (e.g., Kaptein, 2008) and safety culture (e.g., Hofmann & Mark, 2006), I refer to the dimension of change-orientation as a change-oriented culture, acknowledging that change-oriented culture is a single dimension rather than a broad categorization (e.g., market culture; Quinn & McGrath), but adhering to this semantic norm in organizational culture literature.

Accordingly, the goal of this research project is twofold. First, drawing from a wide literature spanning various organizational culture paradigms, I propose a unifying perspective on change-oriented cultures. I advance theory by (a) integrating the currently separate streams of research on organizational cultures that value change, and by (b) crafting a new dimension,

change-orientation that I argue is found in all organizations and that when highly endorsed by organizational members facilitates and promotes organizational change. Second, I propose that change-oriented cultures (i.e., the change-orientation dimension) facilitates organizational change success directly and indirectly through individual attitudes toward change that are fostered in high change-oriented cultures.

## **Background**

In the next sections, I give a background on organizational culture and introduce major cultural frameworks - discussing both their similarities and differences. I review extant literature on organizational change to introduce what is needed to affect and sustain organizational change efforts. I then delineate the cultural dimension, *change-orientation*, defining the construct and its relationships to organizational change antecedents and outcomes. I create a measure for a change-oriented culture by drawing from existing cultural framework measures, and empirically show its relationship to a theorized nomological network (Cronbach & Meehl, 1955). Lastly, I discuss implications for future scientific directions and practice.

**Organizational Culture.** Organizational culture represents the underlying assumptions, norms, values, and artifacts (tangible manifestations of underlying assumptions) that drive the day-to-day behavior and business operations of an organization (Schein, 2004). These underlying assumptions manifest themselves in everyday life in a variety of conscious and unconscious ways. That is, they are frequently represented in espoused values that employees readily list off, and enacted values that drive the way employees act at work (Schein, 2004). Moreover, these underlying assumptions may be evident in cultural artifacts in the physical and psychological workspace. For instance, companies that believe the best work is completed communally may have an open layout in their offices, with no walls separating employees.



Culture theorists like Schein (2004) assert that culture emanates from the founders of the organization, or at the very least from the current upper-level managers. Thus, leaders in the organization play a big role in setting and maintaining cultural values and assumptions. Although leaders play a large role in culture formation and maintenance, employees themselves also play a role in culture maintenance according to the attraction-selection-attrition framework (ASA; Schneider, Goldstein, & Smith, 1995). The ASA posits that like-minded employees are attracted to an organization, and then self-select into the organization after becoming more familiar with the culture during the recruitment process. Finally, those employees who do not feel they fit with the culture leave (voluntarily or involuntarily) the organization. This process effectively ensures that the organization continues to have a homogenous culture. Thus, leaders form culture, and both leaders and current employees maintain culture over time.

Researchers began investigating organizational culture in much the same way researchers first investigated personality – by attempting to find *the* framework that fits all organizations (e.g., O'Reilly et al., 1991). Researchers have created quantitative measures and complex taxonomies to categorize organizations into broad cultural types that describe the culture of an organization in its entirety (e.g., Quinn & Rohrbaugh, 1983). These holistic cultural investigations have proven fruitful, advancing an understanding of culture by providing common frameworks to describe an entire organization, thus allowing in depth explorations of that specific perspective. For example, in the CVF, an organization with a market culture bases all of its structure, values, and employee behaviors on the underlying assumption that “An achievement focus produces competitiveness and aggressiveness resulting in productivity and shareholder value in the short and immediate term – clear goals and contingent rewards motivate employees to aggressively perform and meet stakeholders’ expectations” (Hartnell, Ou, &

Kinicki, 2011, p. 697). Hence, researchers seeking to understand an organization driven by its stakeholder expectations rather than customer desires could do so using the CVF as a guiding taxonomy.

However, the emphasis on having a complete understanding of an entire culture has also led to a silo'ed research paradigm, wherein complementary streams of research occur in parallel without the integration of ideas across research studies. For instance, it is infrequent, if ever, that organizational culture researchers use both the CVF (Quinn & McGrath, 1985) and the Organizational Culture Profile (O'Reilly et al., 1991) to inform their research and data collection. Such an integration would result in, not only a very large, tedious, and lengthy study for the participants, but also one difficult to interpret given the disjoint foci of the taxonomies. Thus, to maximize knowledge and a deeper, more comprehensive understanding of a change-oriented culture, in particular, researchers should zero in on and capitalize on these varying cultural frameworks, integrating across different perspectives on cultures and addressing common themes to extract a synthesized focus.

**Organizational Change.** Organizational change represents a difference in internal and/or external conditions of an organization, due to planned efforts or unplanned, which is experienced at either the organizational, group, or individual level (Martins, 2011). Admittedly, this definition is broad, and its ambiguity has progressed the organizational change and development literature into a multitude of different directions. For instance, organizational change can be classified by its temporal dimension (i.e., episodic vs. continuous; Weick & Quinn, 1999), its purposeful nature (i.e., deterministic vs. managerial choice; Hofmann, 1999; Porras & Robertson, 1992), or some combination of those two characteristics represented as an underlying

driver of change (i.e., teleological, life-cycle, evolutionary, or dialectical motors; Van de Ven & Poole, 1995).

As research and practice on changing organizations has progressed, two camps have emerged: organizational development grounded in action-research and organizational change grounded in theory. Historically, organizational development specifically dealt with teleological (planned) change (Austin & Bartunek, 2003), whereas organizational change focused on broad theories covering abstract concepts, such as the evolutionary processes of organizations (e.g., Van de Ven & Poole, 1995). The organizational development literature has been criticized for its lack of methodological rigor and theoretical bases in largely action-research based studies (Austin & Bartunek). Contrarily, the organizational change literature has been criticized for its lack of applicability and utility for practitioners (Martins, 2011). Despite the criticisms, both literatures have been valuable in helping organizational leaders by introducing aspects of change that hinder or facilitate change efforts.

A critical part of the organizational change definition (Martins, 2011) is that organizational change is both a group-level and individual-level phenomenon. Organizational change is a group phenomenon in that changes do not happen in a vacuum to one employee; changes are initiatives often involving many employees, if not all organizational members (depending on the scope of the change; Greenwood & Hinings, 1996). Organizational change is also an individual phenomenon in that organizational change may be experienced and perceived differently by individual employees. Moreover, process models of effective change (e.g., Kotter, 1996) that prescribe steps for change champions to take when implementing change initiatives inherently involve individual employees carrying out actions to make the change successful. Thus, although change may affect the organization as a whole, it is experienced individually and

individual efforts are what combine to create effective change efforts. Accordingly, individual employee actions (Seo, Taylor, Hill, Zhang, Tesluk, & Lorinkova, 2015), perceptions (Shin, Taylor, & Seo, 2012), attitudes (Choi, 2011), and roles (Jansen, Shipp, & Michael, 2015) in driving change have recently garnered a great deal of research attention. Consequently, the focus of my project is on the individual.

Organizational culture change is not a new topic within the organizational sciences; it has been at the forefront of the organizational change and development literature for decades. Specifically, researchers have prescribed steps designed to effect change in culture (Trice & Beyer, 1985), identified characteristics that make culture more amenable to change (Hatch, 2004), and given advice on how to use training to change culture (Scheeres & Rhodes, 2006). The intersection of organizational culture and organizational change typically involves culture as *the* organizational change (Martins, 2011; Trice & Beyer). Indeed, in Robertson, Roberts, and Porras' (1993) categorization of organizational change targets, organizational culture is prominently featured as a social factor oft looked upon from a malleable lens. Less frequently, and certainly less directly, researchers look at culture as a contextual *aide* to organizational change processes, despite several prominent calls for the importance of culture as a potential facilitator of change (e.g., Schein, 2004; Schneider, Ehrhart, & Macey, 2011; Senge, 1990). It is this orientation – considering the culture as the facilitator of change rather than the outcome of change to which my study contributes.

### **Factors that Affect Organizational Change**

A broad perspective on the success of change efforts has focused on individual employee attitudes, characteristics, and behaviors as they relate to organizational change (Choi, 2011). Since the early 1990s, researchers have been fascinated with employees' cognitive and affective

reactions to the change process (e.g., Armenakis, Harris, & Mossholder, 1993). From this perspective, successful change is predicated upon the idea that employees actually drive the change; directives may come from the top, but without buy-in from the front-line employees, meaningful change will not exist (Choi & Ruona, 2011; Judge, Thoreson, Pucik, & Welbourne, 1999). As such, “an increasing number of researchers argue that change efforts fail because leaders often underestimate the role individuals play in the change process” (Choi, p. 479). Although organizational changes themselves have broad implications for employees and may be successfully carried out with group effort, it is the individuals that make up those groups and their independent attitudes that drive their behavior either against or in support of change (Schleicher, Hansen, & Fox, 2011).

Much of the literature on individual contributions to change is based on the theory of planned behavior (Ajzen, 1991), which posits that attitudes toward an attitude object (organizational change in this case) lead to behavioral intentions and, in turn, behaviors themselves. Though lacking in experimental studies, McEachan, Conner, Taylor, and Lawton (2011) found that the three variables in the theory explain around 20% of the variance in behavior in correlational studies (for a critical review of the theory of planned behavior see Sniehotta, Pesseau, & Araújo-Soares, 2014). The most well supported attitudes related to organizational change are readiness for change (Armenakis et al., 1993), commitment to change (Herscovitch & Meyer, 2002), resistance to change (Oreg, 2003, 2006), and organizational change cynicism (Reichers, Wanous, & Austin, 1997). I review each of these attitudes next.

**Readiness for change.** Readiness for change denotes an individual’s preparedness and availability to participate in the change process (Armenakis et al., 1993). Individuals who are ready for change are actively looking forward to the future and want to be a part of the change

process. These individuals see the value in what the organization is trying to do, and are *ready* to move forward with organizational changes (Holt, Armenakis, Feild & Harris, 2007). Employees experience readiness for change when they have a high internal locus-of-control (Holt et al., 2007), when they participate and have a voice in the change management process, when communication is consistent and transparent during organizational changes (Armenakis & Harris, 2002), and when employees identify with the organization (Hameed, Roques, & Arain, 2013). Researchers have shown that when readiness for change is low, employees do not behaviorally participate in the change as much as they do when perceptions of readiness are high (Adil, 2016; Cunningham et al., 2002); consequently, change is typically unsuccessful when readiness is low (Imran, Rehman, Aslam, & Bilal, 2016),

**Commitment to change.** Commitment to change (Herscovitch & Meyer, 2002) represents an employee's affective response to the change process, and the extent to which the employee stands by the change process. Change efforts can be long and arduous, and as such, employees who are committed to the change remain persistent in the effort. When discussing change as a continuous process, commitment to change is critical to keeping employees engaged and involved (Shin, Seo, Shapiro, & Taylor, 2015). Researchers have shown that low commitment to change negatively relates to change success (Ben-Gal & Tzafrir, 2011).

**Resistance to change.** Resistance to change first emerged as a dispositional variable (Oreg, 2003) characterized by a lack of belief in the change process, diminished motivation and buy-in for the change efforts, and low trust in both the changes and the change agents. Resistance to change indicates a mental-inflexibility and a short-term focus (Oreg, 2003). The attitude of resistance to change fits the general tripartite conceptualization of attitudes with affective, behavioral, and cognitive components (Oreg, 2006). Affectively, employees are concerned with

the change, displaying distressed emotions and becoming upset by the prospect of changes. Behavioral manifestations of resistance to change include actively avoiding the changes in the workplace, protesting the changes, and gossiping about the changes. Cognitively, employees who are resistant to change think about how much harder their job will be and do not believe there will be benefits from the change. Employees become resistant when they lose trust in their manager (Oreg, 2006), and when they do not feel congruence between their own goals and those of the organization (Oreg, Bartunek, Lee, & Do, 2018). In turn, resistance to change negatively predicts individuals' adoption of organizational changes (Oreg, 2003), their work functioning (Oreg, 2003), and their continuance commitment – cognitive considerations about one's future at the organization (Allen & Meyer, 1990) – to the organization (Oreg, 2006). However, resistance to change is reduced when employees perceive their leaders as transformational (Oreg & Berson, 2011).

**Organizational change cynicism.** Similar to resistance to change, organizations that go through long change processes or seemingly endless change can engender employees with cynical attitudes toward change (Reichers et al., 1997). Given the statistics on failed change attempts, employees constantly confronted with change efforts develop a skepticism about the success of the change. They develop a pessimistic view (Wanous, Reichers, & Austin, 2000) that relates to a lack of motivation to support the change and general lack of involvement (Wanous et al., 2000). Cynicism toward organizational change develops when the organization has a past history of failed change attempts (Bordia, Restubog, Jimmieson, & Irmer, 2011), when organizational change is perceived as long-term or continuous (Brown, Kulik, Cregan, & Metz, 2015), and when employees lose trust and confidence in the organization – especially due to violations of justice perceptions (Thundiyl, Chiaburu, Oh, Banks, & Peng, 2015). Consequently,

cynicism towards organizational change needs to be minimized such that employees can be active contributors during the organizational change efforts (Wanous et al.).

### **New Perspective on Organizational Change**

Even though continuous and frequent organizational change can drive employees to become resistant and cynical (Oreg, 2006; Wanous et al., 2000), organizational change is now more a force than ever in business (Deloitte, 2017). Organizations today constantly face new challenges. For example, the global economy has permeated almost every industry, forcing organizations to adopt new strategies that traverse country, cultural, and language barriers (Kinicki & Williams, 2017). Virtual teams are now commonplace (Breuer, Hüffmeier, & Hertel, 2016), if not old news, and telecommuting is a norm (Allen, Golden, & Shockley, 2015). The gig economy (i.e., a marketplace characterized by multiple part-time jobs) is forcing organizations to adapt to vastly new ways of doing business, even in existing industries (Spreitzer, Cameron, & Garrett, 2017). Additionally, technology has facilitated a greater rate of change than before, and organizations must adjust to these new demands frequently and effectively (Deloitte, 2017). Given that organizations have to adopt a ready-for-change zeitgeist to meet the fast and growing demands of society, so too must the individuals within organizations adopt attitudes toward change that fit the zeitgeist of the time.

I propose that organizational culture *is* the context that drives an employee's attitudes and subsequent behaviors to adopt the much needed change-oriented perspective. Organizational culture itself is a contextual variable that plays a part in shaping/determining employees' attitudes. According to social information processing theory (Salancik & Pfeffer, 1978), employees form their attitudes based on the social context, on their interactions with surrounding employees. Similarly, affective events theory (Weiss & Cropanzano, 1996) proposes that the



organizational context influences the development of specific (albeit more fleeting) employee attitudes. Combined, these theories suggest that the contextual environment, i.e., the organizational culture, critically influences employees' attitudes, including their attitudes toward change. Furthermore, these attitudes towards change are maintained by the employees themselves. In support, the attraction-selection-attrition framework (Schneider et al., 1995) proposes that organizations are made up of like-minded individuals, who were originally attracted to the organization's zeitgeist, selected by the organization, and who chose to stay with the organization, thus increasing the homogeneity of values over time. As employees stay, they are influenced by the subjective norms of the group, which the theory of planned behavior (Ajzen, 1991) suggests are key in determining employees' behaviors – in this case, change-related behaviors that include influencing new employees who join the organization.

My view of culture as a key contextual variable supporting change diverges from much of the extant literatures in organizational development and change, and organizational culture, which have traditionally focused on how organizational change can act on organizational culture (Martins, 2011). Thus, organizational culture is most often thought of as the target of the organizational change rather than an antecedent or contextual variable enabling change. I propose that perceptions of a change-oriented culture can augment individual attitudes toward change and behaviors during organizational change efforts, thereby increasing the effectiveness of change processes; more simply, a change-oriented culture helps facilitate change in organizations.

### **Change-Oriented Culture**

My concept of a change-oriented culture stems from integrating several distinct frameworks of organizational culture that include adaptability. For example, Denison and

Mishra's (1995) model of culture has an adaptive quadrant that is motivated by external forces and values flexibility. The CVF's (Quinn & McGrath, 1985) adhocracy culture is built on the foundation of creativity and change. Kotter and Heskett's (1992) theory of organizational culture and change refers to an adaptable culture that values agility and transformation. Learning organizations (Watkins & Marsick, 1993) represent organizations that assume continuous learning and growth are the key to adapting to a changing marketplace. Learning organizations are characterized by the notion that learning at the individual level is critical and also facilitated by organizational structures and organization-level learning (Marsick & Watkins, 2003). Similar research on organizational learning processes (Flores, Zheng, Rau, & Thomas, 2012) stress the importance of open lines of communication to facilitate growth and constant development. Clearly, researchers and practitioners alike appreciate the importance of cultures that value change and assume adaptation is a key to success.

To predict specific outcomes better than broad taxonomies can, researchers have diverged from a perspective on organizational culture centered on broad taxonomies for categorizing organizations (e.g., the organization is either adhocracy, clan, hierarchy, or market in the CVF; Quinn & Rohrbaugh, 1983) to develop distinct cultural dimensions. Indeed, Schneider et al. (2011) indicated that cultural measures focused on specific outcomes should be more accurate in prediction than general cultural measures, such as the organizational culture profile (e.g., aggressive work culture on workplace deviance; Restubog, Zagenczyk, Bordia, Bordia, & Chapman, 2015). It follows that a change-oriented culture should be thought of in the same vein as ethical, safety, and diversity cultures (Clarke, 1999; Treviño & Youngblood, 1990; Zohar & Hoffman, 2012). Specifically, entire cultures may not be ethical at the organizational level (i.e., there are many more aspects to their culture), but when researchers and practitioners say

organizations have ethical cultures they are saying the organizations are high in this dimension that is critical to employees acting ethically (Treviño & Youngblood).

I propose that individual perceptions of a change-oriented culture are predictive of positive attitudes toward change and subsequently individual outcomes related to organizational changes. This assertion is based on individual-level perceptions of culture, change, and outcomes (Schneider et al., 2011), and a low-bandwidth high-fidelity relationship (i.e., narrowly focused specific measures are quite good at predicting their respective narrow, specific outcomes; Hogan & Roberts, 1996). Additionally, researchers have consistently shown that attitudes toward change predict change-related behaviors (Shin et al., 2012), job satisfaction (Wanberg & Banas, 2000), and turnover (Shin et al.). Thus, as change becomes omnipresent in the workplace, a key competitive advantage will be fostering those attitudes and keeping them at a high level. I assert that companies with a change-oriented culture will do just that.

**Common cultural conceptualizations.** Drawing on well-established holistic frameworks of organizational culture, one can establish a conceptualization for a change-oriented culture that is common across many frameworks. Accordingly, I introduce five of the most commonly used change-oriented culture conceptualizations. Each cultural ideology is described by its defining characteristics and Table 1 shows how those characteristics are both overlapping and distinct from one another. Upon examination, several common themes appear including flexibility, a relative lack of rules or structure, and an emphasis on creativity and innovation.

***Flexibility.*** A culture built to adapt to change values flexibility. As changes arise, organizations need to be agile enough to address these changes in real-time. In Denison and Mishra's (1995) model, adaptability and involvement culture types value change and are flexible in their response to problems that arise; these are organizations that will change as opposed to

remain stable and are not set in their ways. Being overly rigid in job roles or ways of thinking can cause an organization to be slow to react. Lewin's (1947) unfreezing process would be more readily achievable or potentially unnecessary in flexible organizations. Quinn and Rohrbaugh's (1983) CVF references agility and adaptability in the adhocracy culture type, and O'Reilly et al.'s (1991) innovation and risk taking dimensions are characterized by low levels of stability and high levels of opportunity (i.e., employees grasping chances when they arise ). Additionally, the attraction-selection-attrition framework (Schneider et al., 1995) asserts that organizations valuing flexibility are made up of employees who enjoy malleable job roles and who dread overly rigid roles and practice.

***Structure and rules.*** Based off of extant culture literature, cultures valuing change are characterized by a lack of bureaucracy (Wallach, 1983). Extensive rules would hold employees back from actively engaging in the change process. Being rule-oriented and highly organized is negatively related to O'Reilly et al.'s (1991) innovation and risk taking dimension. Learning organizations (Senge, 1990; Watkins and Marsick, 1993) have systems in place for continuous growth and change, such as recognition for taking initiative, and systems for delineating information to employees quickly (Marsick & Watkins, 2003). Employees are empowered to be a part of the change, participating in the decision making process, and taking an active role in facilitating change.

***Creativity and innovation.*** A key component incorporated in change-oriented cultures is the value placed on creativity and innovation (Watkins & Marsick, 1993). These organizations view innovation as key to success and ultimately survival. The appreciation of creativity and novelty is a key tenant in cultures that are adaptable and ready for change at all times, and as

such, change and innovation related behaviors are rewarded. Tenants of creativity and innovation are found directly and indirectly in each of the cultural frameworks presented in Table 1.

**Facilitating change.** For an organizational culture to support continuous change, it needs to satisfy certain conditions that create successful change. I propose these conditions include: leadership must be supportive both of employees and change efforts, communication in the organization should be transparent and timely, and employees must feel as though they are being treated fairly.

**Leadership.** Top management likely creates a change-oriented culture (Al-Haddad & Kotnour, 2015). Scholars in organizational culture suggest the organization's founders initially create the culture and that top management teams or personnel maintain and sustain the culture (Schein, 2004). Hence, as a function of developing a culture that values change, leaders help foster and sustain positive change-related attitudes in the organizational members (e.g., Zhao, Seibert, Taylor, Lee, & Lam, 2016). Initially, this means creating a culture wherein employees report a high readiness for change (Armenakis & Bedeian, 1999). As leaders drive change, they provide individualized attention to employees, thus encouraging and facilitating change at the individual level (Oreg & Berson, 2011). In addition to driving cultural values, leaders also play an important role in motivating employees and helping shape positive attitudes. Employees perceiving transformational leadership behaviors by their leaders are less resistant to change (Oreg & Berson, 2011). This may be because inspirational motivation includes communicating a grand vision and articulating how employees fit in with that vision (Bass & Riggio, 2006), which can be extremely motivating for employees (Berson, Halevy, Shamir, & Erez, 2015). Followers in high-quality leader-member exchange relationships, where the leaders provide certain employees with resources and attention, tend not to hold resistant attitudes (Oreg & Berson,

2011). Commitment to change and readiness for change must also be enhanced (Herscovitch & Meyer, 2002; Holt et al., 2007) through increasing employees' perceptions of (a) leadership support (Neves, 2011), (b) leader commitment to change (Abrell-Vogel & Rowold, 2014), and (c) expectations for positive change outcomes (Shin et al., 2012).

**Communication.** Another tenet of successful change methods (Al-Haddad & Kotnour, 2015) is high-quality communication during change. Through communications of changes and of the vision for change, employees know what is happening and how they fit in during change (Judson, 1991; Kotter, 1996). Change-oriented cultures, therefore, must be characterized by transparent and high quality communication (Byrne, 2015). During organizational changes, this might mean face-to-face, two-way communication where employees and managers can notice the subtle nuances of messages and have a chance to provide real-time feedback to each other (Young & Post, 1993). Organizations wherein long-term goals are communicated, especially following a cascading approach where each employee understands how his or her goals align with strategic goals, may mitigate the worries and affective reactions of resistant employees (Kinicki, Jacobson, Galvin, & Prussia, 2011).

**Fairness.** Finally, political behaviors and violations of justice – essentially subversive behaviors – detract from commitment to change (Bouckennooghe, 2012; Kool & van Dierendonck, 2012). Thus, leadership that is fair and supportive both relationally and in providing tangible resources enhances positive attitudes toward change and decreases negative attitudes toward change. To minimize organizational change cynicism (Reichers et al., 1997), leaders should manage employees' emotions as well as manage relationships and interactions between those with a cynical attitude and those without (Ferres & Connell, 2004). Moreover, employees become cynical about changes (Barton & Ambrosini, 2013) and resistant to changes

(Georgalis, Samaratunge, & Kimberley, 2015) when they feel there are lapses in organizational justice; hence, attention to displaying behaviors that enhance fairness perceptions is essential (Bies & Moag, 1986).

Organizational culture has the ability to affect the formation and sustenance of change-related attitudes (reviewed above) directly, as well as buffer/enhance the behaviors stemming from any negative/positive change-related attitudes. Furthermore, within a change-oriented culture, valuing change positively may function as a subjective norm within the theory of planned behavior (Ajzen, 1991). Specifically, as employees consider what those close to them think about change-oriented behavior, they recognize that such behavior is valued and good, and their display of that same behavior would be appropriate. Thus, a change-oriented culture would buffer (reduce) any negative effects of cynicism and resistance, as those attitudes would not be valued nor the norm. Furthermore, one can argue that acting on such negative attitudes towards change would be going against the norms and values of the organization (norms and values which individual employees have adopted), possibly creating cognitive dissonance (Festinger, 1957), which results in either a reduction of negative attitudes about change or turnover. Namely, being in an organization that values change - provided that an individual's values are the same as the organization's, which they should be according to the attraction-selection-attrition model (Schneider et al., 1995) - yet not acting consistent with those values, can cause dissonance and result in either changing one's attitudes to fit the contextual environment/norms or leaving the organization (Schneider et al. 1995).

Although the underlying assumptions of organizational culture may influence employees' behavior (Schein, 2004) and still do in change-oriented cultures, employees in change-oriented cultures have substantial latitude in which behaviors they choose to engage. Change-oriented

cultures have fewer rules and looser organizational structures (O'Reilly et al., 1991) than cultures that are not change-oriented (e.g., bureaucratic cultures; Wallach, 1983), which would otherwise restrict them from being innovative and taking risks (Denison & Mishra, 1995; Wallach, 1983). The values and norms of a change-oriented culture, hence the subjective norms, support a variety of risk-taking or innovative-related behaviors that are all within the overall perspective of a positive orientation towards change. Thus, employees in change-oriented cultures engaging in change-resistant behaviors will still face the same pressures as within any other culture to fit the norm.

**Defining a change-oriented organizational culture.** Following Quinn and Rohrbaugh's (1983) direction, to identify what underlying assumption characterizes a culture, researchers must answer the question: what does the organization deem as necessary and critical for attaining organizational effectiveness? Hence, through synthesizing common themes among existing organizational culture taxonomies and identifying characteristics that facilitate successful organizational change efforts, I propose the following three-part definition of change-oriented culture. First, a change-oriented culture must operate from the basic assumption that effective operation and, ultimately, organizational survival is predicated upon the need to constantly adapt to internal and external forces acting on the organization. Second, this underlying assumption will drive espoused and enacted values – the change-oriented culture will value (espoused) flexibility, and creativity and innovation, and act accordingly (enacted) by providing high-quality leadership and communication, and emphasizing fairness in all organizational processes during change. Third, based distally on its underlying assumption noted above, and proximally on espoused and enacted values, a change-oriented culture carries with it policies that facilitate change and celebrate change successes, and has structures in place to maximize agility.



## **Outcomes of Organizational Change**

Outcomes of organizational change processes can vary widely (Martins, 2011). For instance, outcomes may include quality of patient care (Bartunek, Rousseau, Rudolph, & DePalma, 2006), job uncertainty (Rafferty & Griffin, 2006), and technology adoption (Oreg & Sverdlik, 2011). Thus, as changes can occur within and across an infinite number of tasks in the workplace, using the same outcome metric for all change processes is ill advised. However, to capture the many different outcome measures reported in the literature, meta-analyses tend to use overarching broad categories of change outcomes (e.g., Robertson et al., 1993). That said, there are some organizational change efforts that share a few common effects on employees, such as decreased organizational commitment (Herold, Fedor, & Caldwell, 2007) and increased turnover intentions (Rafferty & Griffin, 2006). Additionally, organizational changes represent a significant stressor (McHugh, 1997); thus, if not managed properly with adequate resources (Bakker & Demerouti, 2007), leadership support (Neves, 2011), and, as I propose a change-oriented culture, employees respond to those stressors by decreasing their own commitment and potentially considering voluntarily turnover. The attraction-selection-attrition framework (Schneider et al., 1995) denotes a cultural mismatch as attrition, hence employees not feeling the organizational changes fit their values and assumptions of how business should be transacted, tend to leave the organization.

Thus far, I have developed the change-oriented culture from an individual perception standpoint with justifications based on the integration of a few theories including the theory of planned behavior (Ajzen, 1991) and individual employee attitudes toward change (Choi, 2011). Level of analysis is a pertinent issue in organizational culture research and some scholars recommend that one should address this issue by ensuring the level of analysis of culture

matches the level of analysis in constructs being predicted (Schneider et al., 2011). Thus, discussing organizational culture at the individual-level (i.e., an individual's perception of the organizational culture) is merited when also looking at individual-level drivers of organizational change, such as employee attitudes. Correspondingly, outcomes specific to the change process should reflect the individual rather than the organization, consistent with Schneider et al.'s (2011) suggestions. Individual-level outcomes include change-related behaviors (Shin et al., 2012), such as speaking positively about change and coming up with new ideas for change (Herscovitch & Meyer, 2002). Individual change-related behaviors are important because although change may be driven or championed by upper management, change is *enacted* by employees at all levels of the organization (Choi, 2011). Perceptions of the benefits of change (Caldwell, Herold, & Fedor, 2004), such as how the change has affected the effectiveness of a work unit often serve as subjective proxies for objective change success metrics (Caldwell et al., 2004).

### **Conditions to Support Change-Oriented Organizational Culture**

To support the proposed definition, a change-oriented organizational culture must comprise six dimensions: 1) *flexibility*, 2) *innovation and creativity*, 3) *structure centered on agility and non-restrictive rules*, 4) *high quality communication* where employees are invited to participate in a joint dialogue about the organizational change, 5) *organizational justice*, by holding employees accountable and actively supporting workplace fairness with policies and expectations for treating employees appropriately, and 6) *leader relationships based on trust and support* to provide resources, *and inspirational motivation* to convey the vision of the changes and enhance the personal relationship between leaders and followers.

Following Judge, Erez, Bono, and Thoreson's (2003) study establishing preliminary validity for the construct of core-self evaluations, I present my hypotheses as conditions. That is, the following conditions must be met to establish initial validity evidence for the construct of change-oriented organizational culture.

*Condition 1:* Change-oriented culture is a single higher-order construct.

*Condition 2:* Change-oriented culture is measured reliably as indicated by an acceptable Cronbach's alpha.

*Condition 3:* Change-oriented culture is represented by six first-order dimensions: a) flexibility, b) innovation and creativity, c) structure centered on agility and non-restrictive rules, d) high quality communication, e) organizational justice, and f) leader relationships based on trust, support, and inspirational motivation.

For the change-oriented culture to demonstrate validity as a construct, perceptions of change-oriented culture should be related to critical individual outcomes associated with the change process. Outcomes may include employee attitudes toward change, commitment to change, turnover intentions, and change-related behaviors, such as participation in change-related discussions and actual turnover. Consistent with the theory of planned behavior (Ajzen, 1991), change-oriented culture should be related to organizational change outcomes, both attitudes (e.g., intentions) and behaviors, through a partially mediated relationship with organizational change attitudes (Figure 1). In addition, according to prominent culture theorists (e.g., Schneider et al., 2011), the bandwidth-fidelity tradeoff (Cronbach, 1960), and findings from other low bandwidth measures of culture (e.g., ethical culture; Kaptein, 2008), change-oriented organizational culture should be associated with these change-related attitudes more strongly than broad holistic taxonomies of culture.

People desire to have consistency in the way they see the world and internal consistency (consistency of one's own actions and beliefs), such as how they answer survey questions (Cialdini, Trost, & Newsom, 1995). Indeed, Festinger's (1957) dissonance theory proposed that individuals experience discomfort (i.e., dissonance) when they possess two cognitions are incongruent with one another (Hinojosa, Gardner, Walker, Cogliser, & Gullifor, 2017). Thus, when individuals hold positive attitudes toward change characterized by a belief in the value of change, trust that leadership can achieve the changes, and feelings that the change will be beneficial, it follows that to hold congruent and consistent cognitions, they will also feel positively about the organization, and feel positively when looking back upon the change. As such, change-oriented culture should relate positively to attitudes toward change and in turn subsequent attitudes, thereby maintaining internal consistency (Cialdini et al., 1995). The following conditions must be met to establish construct validity evidence (Cronbach & Meehl, 1955) for change-oriented organizational culture.

*Condition 4:* Change-oriented culture is positively related to a) readiness for change and b) commitment to change.

*Condition 5:* Change-oriented culture is negatively related to a) resistance to change and b) change cynicism.

*Condition 6:* Change-oriented culture is positively related to a) change-related behaviors, and b) organizational commitment.

*Condition 7:* Change-oriented culture is negatively related to a) perceptions of change success, and b) turnover intentions.

*Condition 8:* Change-related attitudes of a) readiness for change and b) commitment to change partially mediate the relationship between change-oriented culture and the

following individual outcomes: turnover intentions, organizational commitment, perceptions of change success, and change-related behaviors.

*Condition 9:* Change-related attitudes of a) resistance to change, and b) change cynicism partially mediate the relationship between change-oriented culture and the following individual outcomes: turnover intentions, organizational commitment, perceptions of change success, and change-related behaviors.

*Condition 10:* Change-oriented organizational culture relates to change-related attitudes (readiness for change, commitment to change, resistance to change, cynicism toward change) and individual outcomes (turnover intentions, organizational commitment, perceptions of change success, change-related behaviors) significantly stronger than the a) adhocracy culture from the CVF, b) innovative culture from Wallach's (1983) framework, and c) the systems and structures dimension of learning organizations.

## Methods

### Participants and Overall Procedures

Data were collected using Amazon's Mechanical Turk (MTurk). Amazon's MTurk is a commonly used website for soliciting survey responses from individuals paid to take surveys (Cheung, Burns, Sinclair, & Sliter, 2017). The vast majority of these individuals hold jobs outside of MTurk. I acted as a *Requester* – the administrator of surveys – and I solicited, recruited, and payed *Workers* - MTurk respondents – to complete my survey. This survey task is referred to as a Human Intelligence Task (HIT), to which workers can only respond once. I paid each worker \$1.00 for survey completion - \$1.00 is within the range for which many surveys are posted (Goodman, Cryder, & Cheema, 2013). Amazon charges a 20% overhead for each worker, thus my total cost per survey completion was \$1.25. To help pay for the data collections, I applied for and received \$1250 in research funding from Colorado State University's Industrial and Organizational Psychology program Small Research Grant.

MTurk workers were considered an appropriate sample for several reasons. First, MTurk represents a diverse set of workers (Goodman et al., 2013), and researchers have found that MTurk workers are more similar in demographic characteristics to traditional organizational samples than are student samples (Holden, Dennie, & Hicks, 2013). Second, given my goal in this research was to create and assess a cultural dimension that is not unique to one organization but rather cuts across all organizations, workers from many different organizations provide more useful responses to fit the study goals. Third, measuring change-oriented culture using individual employee perceptions is appropriate given the individual-level of both the mediators and outcome variables in this model. Since this study focuses on individuals' organizational culture perceptions and their individual attitudes and contributions to change rather than group

perceptions, aggregating to a higher level, which is required to support a culture construct is not required. Therefore, since MTurk provides a diverse set of workers employed by many different organization from across industries and geographic locations (Landers & Behrend, 2015), MTurk workers were an ideal sample for this study.

Using MTurk qualifications, I stipulated that MTurk workers must be restricted to the following: workers within a country where the primary language is English (I restricted this to Australia, Canada, Ireland, the United Kingdom, and the United States); and workers who have at least a 50% acceptance rate on all of their work for MTurk. Using my own qualifications, I required workers to be employed at least 20 hours per week outside of MTurk and to subsequently identify the name of the organization, and for the company they identified to have gone through some significant change in the past year (see Appendix A for instructions). In addition, workers using duplicate IP addresses were prevented from taking the survey, and workers who completed the scale development survey were excluded from taking subsequent surveys.

Best practices when using MTurk include extensive checks for quality responses (Cheung et al., 2017; Eickhoff & de Vries, 2011, 2013), such as attention checks (e.g., ‘Please answer 3 on the Likert scale for this question’) and timing checks (e.g., survey takes at least 3 minutes to complete if every question is read). Therefore, I set up the following checks: attention checks, minimum time for completion, and a time limit for completion. Also consistent with practices for using MTurk, workers were told that if they failed these checks they would not be compensated for completing the survey.

I used two data collections of MTurk workers. The first collection of 600 was used to create and evaluate the measurement of the change-oriented culture construct. The sample was

randomly split in half to provide a development sample and confirmatory sample (DeVellis, 2012). Traditionally, concerns with splitting a sample in half to first develop a scale and then confirm its structure include capitalizing on variance unique to the sample and that the two halves are more closely related than if they were collected as two distinct samples at different times (DeVellis). However, the use of MTurk somewhat alleviates these concerns, as members of the sample work in different organizations, occupations, industries, and geographic locations (DeVellis).

The sample used for scale development ( $n = 300$ ), was 50.3% female, reported an average age of 37.75 years ( $SD = 11.70$ ), was well educated (20.7% with a high-school degree only, 9.0% working toward a college degree, and 70.3% with a complete college degree or above), and represented a variety of industries (e.g., agriculture, finance, etc.) and occupations (e.g., analyst, patient escort, HR manager, etc.). The sample used for confirmatory factor analysis ( $n = 300$ ), was a slight majority female (58.0%), had an average age of 36.50 years ( $SD = 10.20$ ), was well educated (20.3% with a high-school degree only, 10.7% working toward a college degree, and 68.0% with a complete college degree or above), and represented a variety of industries (e.g., health care, education services, etc.) and occupations (e.g., program manager, attorney, social worker, etc.).

The second data collection ( $n = 363$ ) was used to test a structural model hypothesizing conditions 4 through 9 (Figure 1). MTurk workers who participated in the first data collection of 600 were not permitted to participate in the data collection for the second sample of 363. The second sample was a majority female (61.4%), had an average age of 35.47 years old ( $SD = 9.79$ ), was well educated (21.5% with a high-school degree only, 11.0% working toward a college degree, and 67.5% with a complete college degree or above), and represented a variety of



industries (e.g., real estate, manufacturing, etc.) and occupations (e.g., physician, engineer, floor manager, etc.).

Given my data were all collected using a single survey at a single time point, common-method bias could affect the results of my study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To reduce the potential for common method bias, I varied positively and negatively worded items throughout the surveys, and provided instructions that attempted to reduce socially desirable responding (Podsakoff, MacKenzie, & Podsakoff, 2012).

### **Sample One Procedures and Measures**

To develop the change-oriented culture dimension scale, I drew items from several existing measures of organizational culture. Taking items from existing measures is a technique used in other research focused on developing unifying concepts, such as job engagement, which combines elements of affective and cognitive expression and attention (Rich, LePine, & Crawford, 2010) and organizational justice, which combines fairness of pay and interpersonal treatment (Colquitt, 2000). Both Rich et al. and Colquitt developed their scales using items from existing measures that have accumulated validity evidence. Consistent with their approach, I constructed an initial pool of items for the change-oriented culture scale using items drawn from existing measures of organizational culture.

The first sample of participants completed a single measure that contained a subset of items drawn from each of the following organizational culture scales (see Appendix B): 43-item dimensions of learning organizations scale (Marsick & Watkins, 2003), 54-item organizational culture profile (O'Reilly et al., 1991), 24-item CVF organizational culture assessment instrument (Cameron & Quinn, 2011), Wallach's (1983) 24-item organizational culture index (adapted from Margerison, 1979), and Denison and Neale's (2000) 60-item organizational culture survey.

However, after receiving permission from the authors of the dimensions of learning organization questionnaire and Denison and Neale's 60-item organizational culture survey that stipulated I use either all items from their scales or no items at all, I wrote my own items to reflect the relevant concepts from their frameworks. I wrote 12 items to assess the flexibility and change dimension of Denison and Neale's framework (see Appendix B), and I wrote 15 items to assess the structure and rules and sharing a vision and incorporating feedback dimensions of learning organizations. All response scales on this survey were 7-point Likert-type scale ranging from 1 = strongly disagree to 7 = strongly agree.

**Change-oriented culture.** As proposed above, change-oriented organizational culture comprises six dimensions: flexibility, innovation and creativity, structure and rules, high quality communication, organizational justice, leader relations, and inspirational motivation. Items used to create the change-oriented culture scale are bolded in the original full scales shown in the Appendix B.

**Flexibility.** Flexibility was assessed by combining 11 of the items I wrote to reflect Denison and Mishra's (Denison & Neale, 2000) cultural framework that refer to 'flexibility and change' in their 'adaptive' dimension of culture, one item from Cameron and Quinn's (2011) six-item adhocracy dimension (adaptability) of the CVF, and one item from the organizational culture profile (O'Reilly et al., 1991) that assesses "stability." The total number of items for assessing flexibility was 13.

**Innovation and creativity.** I used items from the CVF (Cameron & Quinn, 2011) that measure "creativity"; however, those items were double-barreled thus I separated them into six single-barreled items (DeVellis, 2012). I used one item I wrote to reflect risk taking for Denison and Mishra's cultural framework. O'Reilly et al.'s (1991) measure includes items for

“innovation” and “risk taking” and these concepts were covered in both the CVF items and my Denison and Mishra item, thus I did not use any additional items specifically from O’Reilly et al. I also used three items from Wallach’s (1983) eight-item innovation dimension. A total of 10 items were used to assess innovation and creativity.

**Structure and rules.** I used 15 items I wrote to reflect the “systems and structures” and “sharing a vision and incorporating feedback” dimensions of learning organizations (Marsick & Watkins, 2003), two items from the CVF that I separated into three items because one was double barreled (Cameron & Quinn, 2011) assessing “agility” and “goals of innovation and competitive cutting edge”, and four items from the organizational culture profile (O’Reilly et al., 1991) assessing “experimentation”, “careful”, “rule-oriented”, and “highly organized.” Thus, assessment of structure and rules comprised 22 items total.

**High-quality communication.** To assess the quality of communication during change, I used Wanberg and Banas’ (2000) 4-item information scale. I also selected four items from Caldwell et al.’s (2004) 10-item characteristics of change scale that assesses communication patterns during change. Thus, eight items were used to assess high-quality communication.

**Organizational justice.** I assessed justice perceptions using Colquitt’s (2001) 20-item justice scale. The justice scale comprises four dimensions, which can be assessed either independently or as part of a total scale. The dimensions include: procedural (fairness of processes used to make decisions), interpersonal (fairness of personal treatment during the implementation of decisions), informational (adequacy of information communicated about the decision), and distributive justice (fairness of the outcome of decisions).

**Leader relations.** Four items from Podsakoff, MacKenzie, Moorman, & Fetter’s (1990) 23-item measure of transformational leadership behaviors were used to assess support.

**Inspirational motivation.** I used five items from Podsakoff et al.'s (1990) 23-item measure of transformational leadership behaviors to assess articulating a vision, which is essential for inspirational motivation.

**Demographics.** I collected demographic data on gender, occupation, industry, tenure, education, and age.

### **Sample Two Procedures and Measures**

As previously stated, data for sample two were collected using MTurk workers. I used the same procedure for worker screening, attention checks, and data screening as sample one data collection. Sample two comprises new data collected from different MTurk workers than those who participated in sample one, and was not collected until after sample one was analyzed and a scale for change-oriented culture was finalized. All reliability estimates reported below were obtained using sample two. Alpha reliability is acceptable if it is above .70 (Clark & Watson, 1995).

**Change-oriented culture.** I assessed change-oriented culture using the final 32-item scale I created from sample one (see Appendix C). All dimensions showed acceptable reliability of scores, with the following alpha coefficients:  $\alpha = .93$  for Flexibility and Innovation,  $\alpha = .94$  for Leadership and Communication,  $\alpha = .90$  for Justice, and  $\alpha = .91$  for Structure and Rules. Within the structural model the scale was modeled as a second order single factor scale. Combined as a single scale, the reliability of scores was good at  $\alpha = .97$ .

**Organizational change readiness.** I assessed readiness for organizational change using the 25-item measure of change readiness developed by Holt et al. (2007). The measure comprises four dimensions: appropriateness, management support, change efficacy, and personally beneficial. Reliability of scores for each dimension varied from good to below acceptable ( $\alpha =$

.94,  $\alpha = .80$ ,  $\alpha = .79$ , and  $\alpha = .74$  respectively). Organizational change readiness was used as a 1-factor scale in the structural model, and the reliability of scores  $\alpha = .93$  was estimated for the full scale.

**Commitment to change.** I assessed affective commitment to organizational change using the six affective commitment items from Herscovitch and Meyer's (2002) 18-item commitment to change scale. Reliability of scores was acceptable ( $\alpha = .90$ ).

**Organizational change cynicism.** I assessed organizational change cynicism using Wanous et al.'s (2000) 8-item measure of organizational change cynicism. The scale comprises two dimensions termed pessimism and dispositional attribution both of which showed acceptable reliability of scores ( $\alpha = .92$ , and  $\alpha = .85$ , respectively). The measure is analyzed as a single construct in the structural model and reliability of scores was acceptable ( $\alpha = .94$ ) using the full scale.

**Resistance to organizational change.** I assessed the attitude of resistance to change using a 15-item measure developed by Oreg (2006). The measure has affective, behavioral, and cognitive attitudinal components, each of which displayed adequate reliability of scores ( $\alpha = .90$ ,  $\alpha = .82$ , and  $\alpha = .91$ , respectively). The measure is analyzed as a single construct in the structural model and reliability of scores was acceptable at  $\alpha = .94$ .

**Turnover intentions.** I used Cammann, Fichman, Jenkins, & Klesh's (1983) 3-item intention to turnover scale to assess turnover intentions. Acceptable reliability of scores ( $\alpha = .93$ ) were obtained on this sample.

**Organizational commitment.** I used Meyer, Allen, and Smith's (1993) 27-item organizational commitment scale. The scale is composed of three commitment dimensions: affective, continuance, and normative. For this research, I only used the affective and normative

dimensions, since both affective and normative commitment have been shown to meta-analytically positively relate to organizational outcomes such as job performance and attendance, whereas continuance commitment has lacked those same relationships (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Thus, continuance commitment is not as representative of an organizational outcome as the other two commitment dimensions. Reliability of scores using the combined affective and normative dimensions was acceptable at  $\alpha = .941$ .

**Perceptions of change success.** I measured perceptions of organization change success using Caldwell et al.'s (2004) 4-item scale on the consequences of change. This four-item scale is negatively worded, which means high scores indicate a strong perception that the change is not successful. Acceptable reliability of scores was obtained ( $\alpha = .90$ ).

**Organizational change-related behaviors.** To measure the behavioral support for organizational changes, I used three items from Wanberg and Banas' (2000) 4-item change participation scale, and 14 items from Herscovitch and Meyer's (2002) 17-item behavioral support for change scale, specifically the cooperation ( $n = 8$ ) and championing dimensions ( $n = 6$ ). These 17 behavioral items were analyzed as a single dimension construct in the structural model. As a whole the scale showed good reliability of scores (.90).

**CVF - adhocracy cultural dimension.** To measure the adhocracy dimension of the CVF, I used six items from the 24-item organizational culture assessment inventory (Cameron & Quinn, 2011). Reliability of scores for the 6-item measure was acceptable at  $\alpha = .95$ .

**Learning organizations.** To assess learning organizational culture I used the shortened 21-item version of the dimensions of learning organization questionnaire (Yang, Watkins, & Marsick, 2004). The scale is composed of seven dimension with three items each. Each

dimension showed acceptable reliability of scores ( $\alpha = .82$ ;  $\alpha = .86$ ;  $\alpha = .80$ ;  $\alpha = .92$ ;  $\alpha = .86$ ;  $\alpha = .85$ ;  $\alpha = .84$ ), and acceptable reliability of scores on the scale as a whole at  $\alpha = .97$ .

**Innovative cultural dimension.** To measure the innovative dimension of organizational culture proposed by Wallach, I used the 8-item dimension on innovation within the 24-item organizational culture index (Wallach, 1983). Reliability of scores was acceptable ( $\alpha = .86$ ).

**Demographics.** I collected demographic data on gender, occupation, industry, tenure, education, and age.

## Data Analyses

**Sample one analyses.** To reduce the number of items for the new scale, I conducted an item analyses (i.e., item-difficulty, item discrimination) on half ( $n=300$ ) of the first sample, followed by a confirmatory factor analysis (CFA) on the other half ( $n=300$ ) of the sample to verify the emergent factor structure (DeVellis, 2012). In each step of item and factor analyses, items were reviewed both statistically and theoretically. Item difficulty parameters were calculated (means and variances) for each item with the goal of discarding any items with a mean too close to 7 or 1 (using 6 and 2 as cutoffs, respectively) and/or no variability. Items fitting these criteria indicate the vast majority of individuals either endorsed or did not endorse an item, and as such, the items do not discriminate well between individuals (DeVellis). Corrected item-total correlations, which is the correlation between each item and the theorized dimension score total with that item removed were calculated. Items with a corrected item-total correlation below .4 were discarded (Ford, McCallum, & Trait, 1986). I anticipated substantial overlap in item content because items were drawn from several existing scales of similar constructs. To evaluate the extent of overlap, I examined the correlations between each item. For items with correlations

above .85, I evaluated their conceptual contribution to the measure, and to reduce unnecessary overlap, I discarded the item with the lower corrected item-total correlation.

To assess whether the dimensionality of change-oriented culture that I proposed was supported by the data, I conducted an exploratory factor analysis (EFA) using MPlus version 8.0 software using a maximum likelihood estimator (Muthén & Muthén, 2015). When conducting an EFA using MPlus, a specified number of possible factors is required. I specified up to 10 possible factors, thus generating results for measurement models ranging from one single factor to 10 factors. To determine when factors no longer add unique information to the measurement model, I used both the eigenvalues from the EFA and results of a parallel analysis with 500 random data sets (Ford et al., 1986). I then checked factor loadings and cross-loadings to assess any problematic items, such as those with loadings below .4, or cross-loadings on multiple factors. When making decisions about which items to retain, discard, or modify, both statistics and theory were used. I used a factor loading of .4 as a rule of thumb cut-off for excessive overlap or lack of contribution to the factor (Tabachnick & Fidell, 2012). Therefore, items that cross-loaded above a .40 threshold or loaded below .40 on any single dimension were considered problematic and considered for removal or modification.

After making modifications using the above decision-making process and criteria, I used the second half of sample one to confirm the measurement model using CFA in MPlus. I used the chi-square test of model fit, wherein a non-significant test statistic indicates a good fit to the data. However, chi-square is sensitive to sample size; the larger the sample, the more likely chi-square is significant regardless of fit. Therefore, I also used several commonly accepted fit statistic standards (Hu & Bentler, 1999) to evaluate the fit of my measurement model including: the comparative fit index (CFI) where values over .95 are good, Tucker-Lewis Index (TLI)



where values over .95 are good, root mean square error of approximation (RMSEA) where values under .06, are good, and standardized root mean square residual (SRMR) where values less than .08 are preferred.

**Sample two analyses.** The second collected sample of participants completed the new measure of change-oriented organizational culture, measures of change attitudes, and individual change outcomes. Relationships were evaluated using structural equation modeling (SEM) in MPlus. The fit of the measurement model was evaluated by applying the same accepted fit statistic standards as used for the first sample analysis. To further evaluate the fit of the data to the proposed structural model, wherein hypothesized relationships are specified, the path coefficients were examined for significance (Kline, 2016). Consistent with best practices in SEM (Kline), at least one alternative structural model was evaluated to test the validity of the hypothesized model. Fit statistics indicate whether or not one model fits the data, but not whether that model is the best possible fit to the data, thus testing an alternate model allows for the possibility of empirically assessing if another model fits the data equally well or better.

To evaluate the efficacy of the change-oriented culture, I compared the correlations between change-oriented culture and hypothesized outcomes against correlations between the original culture dimensions (adhocracy, innovative, learning) and hypothesized outcomes. Consistent with other studies comparing relationships within nomological networks (e.g., Byrne, Peters, & Weston, 2016) I used an online interactive calculator (Lee & Preacher, 2013).

## Results

### Sample One Results

#### Conditions 1-3.

*Item analyses and exploratory factor analysis.* The initial item pool of 82 items assessing change-oriented culture was administered to half of sample one. No item means were above 6 or below 2 (Table 2), therefore no items were discarded for extreme responses. Corrected item-total correlations (Table 2) indicated nine items should be dropped due to correlations below the .4 threshold (noted in bold in Table 2). Thirteen items (item numbers 11, 13, 42, 43, 49, 54, 56, 59, 60, 64, 66, 68, 77), were removed due to correlations above .85 with another item – these 13 items each had the lower corrected item-total correlation with respect to that item. Thus, 22 items were dropped from this first analysis.

Data for the remaining 60 items were subjected to an EFA with an oblique rotation using MPlus. Based on eigenvalues above 1.00 (DeVellis, 2012), the EFA indicated the data were represented by seven factors (Table 3). Best practices suggest that to determine the number of factors for a scale, one should conduct an EFA and parallel analysis, using the results of both (Raykov & Marcoulides, 2010). Data were subsequently subjected to a parallel analysis, which compares the factor structures from randomly generated data sets with the same number of variables to factor structures found in the observed data set I collected (Crawford et al., 2010). The point at which eigenvalues resulting from the parallel analysis exceed the eigenvalues reported in the EFA marks the point at which the reliable number of factors has been extracted and should be considered the minimum number of factors. Thus, in this case, the eigenvalues of the parallel analysis exceeded eigenvalues obtained in the EFA after three factors were extracted (Table 3).

Combining the information from EFA and parallel analysis indicated a solution between three and seven factors. To decide how many factors to retain, I examined each of the possible factor structures for the data (i.e., 3-7 factors) for fit statistics ( $\chi^2$ , RMSEA, CFI, TLI, and SRMR), factor loadings, and item content (i.e., did the factors actually make sense with the conceptual model). Fit statistics from the EFA were marginally better in each of the subsequent factor structures from three to seven. However, taken together the factor loadings and item content made the most substantive sense with four factors. Namely, items loaded on four dimensions (instead of the six that were proposed) with leadership and communication comprising one single dimension, and flexibility and innovation, and creativity comprising one single dimension. The six factor structure from the EFA actually produced a four factor solution once items were taken out based on cross-loadings (Table 4).

Based off of low factor loadings on all dimensions I removed item 3 (noted with <sup>A</sup> in Table 4). I removed 17 items due to cross-loadings (noted with <sup>B</sup> in Table 4). After a final inspection of the content of the items, five were removed due to a misfit of the content of the items to the content of the overall dimension they were intending to represent (noted with <sup>C</sup> in Table 4). The resulting four factors included the following dimensions: *flexibility and innovation* (n = 11), *leadership and communication* (n = 11), *justice* (n = 5), and *structure* (n = 10) in which items focused on a structure for improvement and personal growth.

***Confirmatory factor analyses.*** To confirm the 4-factor structure of the change-oriented culture scale, I conducted a confirmatory factor analysis on the 37 remaining items representing a four dimensional change-oriented culture using the second half of sample one. Results showed a reasonable fit to the data ( $\chi^2 = 1345.523$  (623),  $p < .001$ ; RMSEA = .062 [.058, .067], CFI = .926, TLI = .921, SRMR = .046). Although reasonable, this model did not meet the criteria for

good fit (Hu & Bentler, 1999). Modification indices produced by MPlus indicated that two items loaded substantially on multiple dimensions. The two items (item 2 and item 76) appeared to represent content on multiple dimensions and were therefore removed. Modification indices suggested allowing errors to correlate on several items, indicating the presence of doublet factors. McDonald (1999) suggests using similar content and factor loadings to choose one of the doublet items to delete rather than allow correlated errors. Thus, I deleted item 29, item 32, and item 82. No other MPlus suggested modifications could be theoretically justified given the content of the items.

After removing those five items (2, 76, 29, 32, and 82) as indicated above, model fit improved significantly ( $\Delta\chi^2 = 400.001$  (163),  $p < .001$ ,  $\Delta CFI = .015$ ,  $\Delta TLI = .016$ ; Cheung & Rensvold, 2001) to acceptable fit levels: CFI = .941, TLI = .937, RMSEA = .059 [.054, .065], SRMR = .045. The chi-square statistic ( $\chi^2 = 945.522$ (460),  $p < .001$ ) remained significant. Correlations between the dimensions ranged from  $r = .66$  to  $r = .86$ , indicating the potential presence of a second-order factor. An examination of the data configured to a second-order factor structure using an oblique rotation showed standardized factor loadings of each of the first-order factors on the second-order ranged from .82 to .96. Cumulatively the results meet Condition 1, which states change-oriented culture is a single higher-order construct. The results only partially meet Condition 3 in that change-oriented culture comprises items within four dimensions and not the proposed six first-order dimensions. To verify a single factor would not represent the data better than the second-order factor structure comprising four first-order factors, a 1-factor model was examined. Results indicate a poor fit to the data ( $\chi^2 = 2492.076$  (702),  $p < .001$ ; RMSEA = .107, CI [.103, .112]; CFI = .788; TLI = .775; SRMR = .066). Factor

loadings and the final scale items are listed in Table 5 (the finalized scale also is shown in Appendix C).

Reliability estimates for each individual dimension were acceptable: flexibility and innovation ( $\alpha = .94$ ), leadership and communication ( $\alpha = .95$ ), justice ( $\alpha = .91$ ), and structure and rules ( $\alpha = .93$ ). Overall, reliability of scores on the full scale with all dimensions combined was good ( $\alpha = .97$ ). These results meet Condition 2.

### **Sample Two Results**

**Conditions 4-7.** Prior to conducting the structural analysis, I used CFA to confirm the structure of each of the scales given to participants. Fit statistics for each scale are reported in Table 6. All models reported a significant chi-square. All item removals and correlated errors noted in the next sections below are identified within their respective scales in Appendix B.

CFA indicated an acceptable fit for change-oriented organizational culture. Affective commitment to change was modeled as a one factor construct. After minimal modifications (i.e., removed one overlapping item) a 1-factor solution fit the data well. A 4-factor model with a second order factor for readiness for change showed an adequate fit to the data after three items were dropped for insufficient loadings. Resistance to change fit the data as a 1-factor solution following the removal of four items for insufficient loadings and overlapping content. The 1-factor solution fit better than a 3-factor solution ( $\Delta\chi^2 = 423.6008$  (43),  $p < .001$ ,  $\Delta CFI = .059$ ,  $\Delta TLI = .068$ ). Organizational change cynicism fit the data as a 1-factor solution after two items were removed due to overlapping content.

After running CFAs on the mediating change related attitudes, I conducted CFAs on the organizational outcomes in my model. Perceptions of change success fit the data as a 1-factor variable, however RMSEA indicated poor fit (Table 6). RMSEA is affected by the number of

degrees of freedom in a model and thus with only four items this model may have been artificially inflating the RMSEA statistic (Kenny, 2015a). Organizational change-related behaviors fit the data as a 1-factor solution after removing four items for low loadings and one item due to overlapping content. Organizational commitment fit the data as a 1-factor solution after allowing errors from two items to correlate due to overlapping content. Turnover intentions fit the data as a 1-factor solution.

Finally, after running CFAs on my organizational outcomes, I ran CFAs on the three forms of culture I would use to compare change-oriented culture against. Wallach's innovative culture dimension fit the data as a 1-factor solution after removing one item due to a low factor loading and two items whose content overlapped with other items in the scale. The adhocracy cultural dimension of the CVF fit the data as a 1-factor solution after removing one item based off a low loading. Perceptions of a learning organization fit the data as a 7-factor solution with a second order latent construct of overall learning organization.

CFA of the full measurement model of the nine constructs (see Figure 1) demonstrated a good fit between the data and the model per the RMSEA and SRMR statistics (RMSEA = .053 [.051, .054]; SRMR = .065), however CFI, TLI and chi-square statistics indicated a poor fit (CFI = .846; TLI = .842;  $\chi^2 = 10419.28(5207)$ ,  $p < .001$ ). As such, I evaluated this full measurement model for redundancies and cross-loadings. I removed one item from the affective commitment to change scale due to content overlap that caused correlated errors and the item to load on multiple factors ("This change is a good strategy for this organization"), one item from the readiness for change scale due to cross-loadings ("It does not make much sense for us to initiate this change"), one item from the resistance for change scale due to cross-loading ("I was quite excited about the change"), one item from the resistance to change scale due to redundancy in

content that led to correlated errors (“I believed that the change would make my job harder”), one item from organizational change-related behaviors that cross-loaded (“I don’t complain about the change”), and one item from organizational commitment that heavily loaded with turnover intentions (“I would be very happy to spend the rest of my career with this organization”). Additionally, I allowed errors from theoretically similar items to correlate in the resistance to change dimension (“I looked for ways to prevent the change from taking place” with “I protested against the change”; “I was afraid of the change” with “I was stressed by the change”), the perceptions of change success dimension (“The change created problems for my work unit” with “This change has disrupted the way my unit normally functions”), the turnover intentions dimension (“It is likely that I will actively look for a new job in the next year” with “I will probably look for a new job within the year”), and I allowed two errors from two of the readiness for change dimensions to correlate (Change Self-Efficacy and Management Support for Change). The removal of items along with correlated errors significantly improved the fit as noted by a significant change in chi-square, CFI, and TLI ( $\Delta\chi^2 = 1783.401 (602), p < .001$ ;  $\Delta CFI = .024$ ;  $\Delta TLI = .024$ ). RMSEA and SRMR indicated good fit for this more complex measurement model (RMSEA = .049 [.048, .051]; SRMR = .063), even though the chi-square statistic still indicated a poorly fitting model (CFI = .870; TLI = .866;  $\chi^2 = 8635.879(4605), p < .001$ ).

Although the measurement model fit indices were not ideal, theory did not support further item removal or error-term correlation. Moving forward with caution, the hypothesized relationships (presented as Conditions) as depicted in the structural model (Figure 1) were evaluated. RMSEA indicated good fit for the model proposed in Figure 1 that tested conditions 4, 5, and 6 (RMSEA = .055 [.053, .056]). However, CFI, TLI, SRMR, and a significant chi-

square statistic indicated poor fit for this model (CFI = .839; TLI = .834; SRMR = .105;  $\chi^2 = 9607.241(4611)$ ,  $p < .001$ ). Given that fit statistically must get worse when testing a nested model (the path model is nested within the measurement model), these changes in fit statistics are logical.

Conditions 4-6 are illustrated in Figure 1, and corresponding path coefficients are listed in Table 8. Condition 4 posited that change-oriented culture is positively related to affective commitment to change and readiness for change and the SEM path coefficients supported this condition for both affective commitment to change ( $\beta = .619$ ,  $p < .001$ ) and readiness for change ( $\beta = .738$ ,  $p < .001$ ). Condition 5 posited that change-oriented culture was negatively related to resistance to change and change cynicism and SEM path coefficients supported this for both resistance to organizational change ( $\beta = -.589$ ,  $p < .001$ ), and organizational change cynicism ( $\beta = -.779$ ,  $p < .001$ ). In Condition 6, I posited that change-oriented culture was positively related to perceptions of change success, change-related behaviors, and organizational commitment, and in Condition 7 negatively related to turnover intentions. The results of testing the structural model showed partial support for Conditions 6 and 7 through path significant coefficients between change-oriented culture and organizational commitment ( $\beta = .564$ ,  $p < .001$ ), and turnover intentions ( $\beta = -.425$ ,  $p < .001$ ). The results of SEM did not support the supposition that change-oriented cultures directly relate to perceptions of change success ( $\beta = .039$ ,  $p = .59$ ) or change-related behaviors ( $\beta = -.029$ ,  $p = .73$ ).

**Conditions 8-9.** Prior to testing for significant mediation, I assessed whether organizational change attitudes related to the outcomes in the model, which included turnover intentions, organizational commitment, perceptions of change success, and change-related behaviors. Path coefficients, standard errors, and statistical significance are listed in Table 9.



Resistance to organizational change was significantly related to perceptions of change success, but affective commitment to change, readiness for change, and organizational change cynicism were not significantly related to perceptions of change success. Readiness for change was significantly related to organizational change-related behaviors, but affective commitment to change, resistance to change, and organizational change cynicism were not significantly related to organizational change-related behaviors. Organizational change cynicism was significantly related to turnover intentions, but affective commitment to change, readiness for change, and resistance to change were not significantly related to turnover intentions. Finally, no organizational change attitude was significantly related to organizational commitment.

To test for mediation I used bias-corrected bootstrapping with 1,000 draws (Preacher, Rucker, & Hayes, 2007). Beta-weights of indirect effects and confidence intervals are displayed in standardized form, and these standardized weights can be greater than the typical beta-weight range of -1 to 1 (Kenny, 2015b). Limited support for Condition 8a was indicated by a significant indirect effect for change-oriented culture on change-related behaviors through readiness for change (indirect effect = .663; CI [-.591, 1.917]), but no significant indirect effect for change-oriented culture on organizational commitment (indirect effect = -.003; CI [-5.033, 5.028]), turnover intentions (indirect effect = .075; CI [-3.925, 4.076]), or perceptions of change success (indirect effect = -.065; CI [-.918, .788]) through readiness for change. Although the effect between change-oriented culture and change-related behaviors through readiness for change was statistically significant, the bootstrapped confidence interval overlapped with 0 indicating that the effect was not actually significant.

No support for Condition 8b was indicated by non-significant indirect effects for change-oriented culture on change-related behaviors (indirect effect = -.031; CI [-.710, .648]),

organizational commitment (indirect effect = .117; CI [-1.584, 1.817]), turnover intentions (indirect effect = .009; CI [-1.497, 1.515]), or perceptions of change success (indirect effect = -.017; CI [-.352, .317]) through affective commitment to change.

Limited support for Condition 9a was indicated by significant indirect effect for change-oriented culture on perceptions of change success through resistance to change (indirect effect = -.461; CI [-.756, -.167]), but no significant indirect effect for change-oriented culture on organizational commitment (indirect effect = -.083; CI [-.682, .516]), turnover intentions (indirect effect = -.079; CI [-.425, .267]), or change-related behaviors (indirect effect = .038; CI [-.190, .267]), through resistance to change.

Limited support for Condition 9b was indicated by a significant indirect effect for change-oriented culture on turnover intentions through organizational change cynicism (indirect effect = -.257; CI [-.459, -.056]), but no significant indirect effect for change-oriented culture on organizational commitment (indirect effect = .115; CI [-.117, .346]), perceptions of change success (indirect effect = -.073; CI [-.202, .057]), or change-related behaviors (indirect effect = -.007; CI [-.160, .145]) through change cynicism to change.

Overall, results show limited support for Conditions 8 and 9, which proposed that consistent with the cumulative literature on organizational culture frameworks, change-related attitudes mediate the relationship between culture frameworks and individual employee/organizational relevant outcomes.

**Alternative model to Conditions 4-9.** An alternative structural model was compared to the proposed model to evaluate the efficacy of the new change-oriented culture dimension. The alternative model was developed using construct correlations and individual scale fit statistics indicated for the data. Namely, the correlation between readiness for change and affective

commitment to change in the hypothesized model was very high ( $r = .97$ ) indicating construct redundancy (Klein, Cooper, Molloy, & Swanson, 2014). Therefore, the alternative model included the affective commitment items as part of the first dimension of readiness (appropriateness of change). Resistance to change was eliminated from the alternative model because of poor fit statistics and a high correlation with perceptions of change success in the hypothesized model, which also suggested construct redundancy ( $r = .87$ ). Given a high correlation with readiness ( $r = .82$ ) and poor measure fit in the hypothesized model, organizational change related behaviors was also eliminated from the alternative model. Lastly, in the alternative model, turnover intentions and organizational commitment were combined as a result of their high correlation ( $r = .83$ ) in the hypothesized model. The resultant alternative model is depicted in Figure 2.

SEM analysis showed the alternative model fit the data significantly better ( $\Delta\chi^2 = 3998.854 (1709), p < .001$ ;  $\Delta CFI = .049$ ;  $\Delta TLI = .050$ ;  $CFI = .888$ ;  $TLI = .884$ ;  $\chi^2 = 5608.387(2902), p < .001$ ) than the hypothesized model. RMSEA and SRMR indicated good fit for this less complex and more parsimonious model; however even with significant improvements, the CFI, TLI and chi-square statistics indicated a relatively poorly fitting model. Although this model fit the data better statistically, the model was inconsistent with theory given that substantively different constructs were derived solely from data driven decisions. Thus, the hypothesized model was retained for testing the last Condition.

**Condition 10.** To assess Condition 10, I examined construct level correlations between the four culture variables: change-oriented organizational culture, learning organizations (Senge, 1990; Watkins & Marsick, 1993), adhocracy dimension of culture (Cameron & Quinn, 2011), and innovative dimension of culture (Wallach, 1983); the four organizational change attitudes:

organizational change cynicism, readiness for change, affective commitment to change, and resistance to change; and the four organizationally relevant outcomes: perceptions of change success, change-related behaviors, turnover intentions, and organizational commitment. Correlation coefficients were compared for significant differences via Lee and Preacher's (2013) online tool for dependent correlations. As shown in Table 7, change-oriented organizational culture related to all change-related attitudes and organizationally relevant outcomes significantly better ( $z > 1.96$ ) than the adhocracy dimension of the CVF (Cameron & Quinn, 2011), and the innovative dimension of Wallach's (1983) organizational culture measure. Additionally, change-oriented organizational culture related to readiness for change, organizational change cynicism, resistance to organizational change, perceptions of change success, organizational change-related behaviors, and turnover intentions significantly better than did perceptions of a learning organizational culture (Marsick & Watkins, 2003). There was no significant difference in the relationships between affective commitment to change and organizational commitment with change-oriented culture and learning organizations.

## Discussion

Organizational change is most often considered an obstacle that organizations must adapt to and overcome, and within today's organizations, change has become a regular, if not, ongoing event with which organizations continue to struggle (Deloitte, 2017; McKinsey & Company, 2015). In response, I proposed that organizations that inherently value change and embrace change as part of normal business are easily adaptable to ongoing change, and consequently more likely to survive in today's environment of continuous change than are those who continue to treat change as an obstacle or a sudden surprise. To support my supposition, I reviewed both organizational change and organizational culture literatures to create a theoretical definition of change-oriented cultures. Mirroring more specific cultural dimensions, such as ethical culture (Kaptein, 2008), change-oriented culture was designed with the goal of relating to relevant organizational change outcomes (Schneider et al., 2011).

At a fundamental level, change-oriented cultures operate with the underlying assumption that the ability to adapt to consistent organizational changes is critical to the success of organizations in the modern marketplace. As such, employees must value flexibility, creativity, and innovation. A change-oriented culture is characterized by high-quality leadership that emphasizes consistent transparent communication, as well as communication that inspires employees and shows them the vision and goals of the organization. Change-oriented cultures have leaders who provide support for employees during times of change, both emotionally and in providing supportive resources for employees. On the surface, change-oriented culture is manifested through structural artifacts, such as a fair reward procedures and systems in place to support employee learning and growth. Not only do employees value flexibility, but this value is reflected in the way they work and the way the organization operates (Cameron & Quinn, 2011).

I developed and tested a measure of change-oriented culture, refining it to create a psychometrically sound scale that would relate to important organizational outcomes with greater efficacy than existing all-encompassing models of culture. I theorized six dimensions of change-oriented culture; however, results from my analyses indicated the presence of only four dimensions of change-oriented culture: flexibility and innovation, organizational justice, communication and leadership, and structure for improvement. The four dimension model simply combined similar dimensions together, such as flexibility and innovation, and leadership and justice. Communication was its own dimension, as was organizational structure, whose focus ended up more on structures for learning and personal growth than originally intended. This indicates that it may not be the lack of rules and structure that helps define a change-oriented culture, but rather rules and structures that facilitate employee development. The four dimensions were highly correlated and statistically represented a second-order latent variable, which further lends evidence to the existence of an overarching construct of change-oriented organizational culture. Results from confirmatory factor analysis using a different and unique sample further supported this four-factor structure. Although the results are a strong step forward, it is important to note that fit statistics were only adequate, but not exceptional, indicating that (a) there may be more error in the measurement than researchers would hope for, (b) the underlying factor structure of change-oriented culture is different than the proposed or confirmed factor structure, or (c) the questions taken from other scales did not completely cover the entire content domain of change-oriented organizational culture. Researchers can advance this literature by examining alternative models and items that test these suppositions.

Because of the less than ideal statistical fit of the measurement model, examination of the structural model hypothesizing relationships between change-oriented culture and relevant

attitudes and behaviors was also less than ideal in terms of statistical fit. Although I make assertions based on the significant path coefficients and confidence intervals reported from testing the structural model, it is important to note that fit statistics for the structural model were not all in the suggested range. The lack of ideal fit indicates there may be alternate ways of looking at these data that better explain patterns of response, and/or adding to the models to find a better solution that captures the change-oriented culture.

After developing the change-oriented culture dimension scale, I tested its relationships with constructs in its nomological net, and compared those relationships to existing cultural frameworks of adhocracy culture (Cameron & Quinn, 2011), innovative culture (Wallach, 1983), and learning organization (Marsick & Watkins, 2003). The intent was to determine whether the change-oriented culture would relate better to relevant outcomes associated with organizational change than these broader frameworks. Again, the measurement model for change-oriented organizational culture and its nomological network of change-related attitudes (i.e., resistance to change, organizational change cynicism, readiness for change, and affective commitment to change), and organizationally relevant outcomes (i.e., perceptions of change success, organizational commitment, organizational change-related behaviors, and turnover intentions) was not as cohesive and tight in terms of fit statistic as desired. Although I tested another model that was data driven wherein fit statistically improved, the model made less substantive sense than the proposed model. Accordingly, I continued with the proposed nomological net model. Change-oriented organizational culture did significantly relate to all four change-related attitudes quite well. The implications of my results are that a culture that values flexibility and is set up to provide opportunities for continual learning likely engenders positive attitudes toward organizational changes.

Furthermore, as comparisons of construct correlations showed, a change-oriented organizational culture related to each of the change-related and outcome attitudes significantly better than existing cultural frameworks such as the CVF, Wallach's culture measure, and learning organizational culture (with the lone exception being that change-oriented organizational culture and learning organizational culture predicted commitment to change equally well). The implication of these findings are that even with less than exceptional fit, the targeted change-oriented culture is superior to large overarching culture models in understanding how culture may play a role in change-related attitudes.

My results showed that change-oriented organizational culture was significantly related to organizational commitment and turnover intentions; however, it was not significantly related to change-related behaviors or perceptions of change success. Theoretically, a change-oriented organizational culture *should* relate to the two change outcomes. Indeed, when the change-oriented culture was correlated with change-related behaviors and perceptions of change success individually rather than in the full model, they were significantly related to one another. It is possible that the excessive overlap between readiness for change and organizational change behaviors, as well as resistance to change and perceptions of change success, left no variance to be accounted for in the model by change-oriented organizational culture. Indeed, when assessing indirect effects, the relationship between change-oriented culture and change-related behaviors was fully mediated by readiness for change, and the relationship between change-oriented culture and perceptions of change success was fully mediated by resistance to change.

Together, though causal direction cannot be concluded, the study results suggest that as employees perceive their culture to be more change-oriented, they will be more open and less resistant to changes. In turn, their accepting perspective leads these employees to demonstrate



behaviors that help organizational change, which gives them a heightened sense of change success after the change is over. For employees who have experienced change in the last year, those perceiving they are in a change-oriented culture will have high organizational commitment and low turnover intentions, especially compared to employees experience change in a non-change-oriented culture.

Taken as individual correlations outside a structural model, change-oriented culture significantly related to each of the four organizationally relevant outcomes (i.e., turnover intentions, organizational commitment, change-related behaviors, and perceptions of change success). Change-oriented culture was related to each of these outcomes significantly better than the CVF, Wallach's culture measure, and learning organizational culture (with the lone exception being that change-oriented culture and learning organizational culture were related to organizational commitment equally well). All three other culture constructs (i.e., the adhocracy dimension of the CVF, Wallach's culture measure, and learning organizational culture) were also highly related to change-oriented culture. Learning organizational culture was so highly related to a change-oriented culture that this may be a case of construct redundancy (Klein et al., 2014). However, the scale I used for a change-oriented organizational culture directly used items from scales for each of these other culture constructs, thus, it is logical there is substantial empirical overlap. It is possible that assessing change-oriented organizational culture through a scale uniquely written to adhere to the theory I have proposed here, rather than drawn from existing culture measures, will show high correlations with these other cultures, but not high enough to indicate construct redundancy as demonstrated in this study.

## **Limitations, Strengths, and Directions for Future Research**

I used multiple techniques to create and assess a change-oriented culture, which though valuable, created a few potential limitations. I collected my data at the individual level and from employees across many different organizations, which on one hand is a strength of the study as the sample and data were appropriate to addressing the research objective. On the other hand, the data and sample may be considered a limitation as group-level data were not collected and organizational culture is a multi-level phenomenon. Thus, the samples I used limited my ability to aggregate cultural perceptions to a group level, since participants were not from the same organization. While understanding the strength of a culture is important and understanding culture at the group level is important, individual culture perceptions can drive individual behaviors and attitudes, which was the focus on my study. Therefore, an argument can be made that examining individual contributions to change may be just as essential as multilevel studies examining group effects. That said, group level effects are also important; hence, researchers should consider extending my work by studying group level effects.

Another limitation of the current study is that I developed the scale for a change-oriented organizational culture using items from existing culture measures of different culture frameworks. Thus, I did not write items specifically for the purpose of this construct development and assessment. While one can argue that the approach I used has been successfully used before (e.g., Colquitt, 2001; Rich et al., 2010), and that the items included in the change-oriented culture scale were chosen because they related to the content domain of this construct, the downside is excessive construct redundancy limiting my ability to show significant added value of the new change-oriented culture dimension beyond existing culture measures. Researchers extending my work should consider writing items specifically for the change-

oriented organizational culture construct and determine if they assess change-oriented organizational culture better than the scale I have developed here.

The cross-sectional nature of these data (for longitudinal methods see Singer & Willett, 2003; for experimental methods see Stone-Romero, 2011) presents another study limitation. Challenges with cross-sectional data in studies proposing mediation include that data were not collected at multiple time points or as part of an experimental manipulation, preventing me from making causal inferences. Thus, I examined statistical mediation only, which is not sufficient for concluding causation or directionality of relationships. Additionally, although MTurk has diverse workers (Goodman et al., 2013), there may be variables I was not measuring that caused it to be a more homogenous sample than I expected. For instance, MTurk workers may be higher on openness to change than other samples since they have embraced a flexible online job that did not exist several years ago. Lastly, common method bias (Podsakoff et al., 2003; Podsakoff et al., 2012) may still be considered a potential concern in this study since data were collected as single survey instances. Though I attempted to reduce common method bias apriori, there still remains the potential for inflated or deflated relationships.

Strengths of this research study include that it provides initial evidence for the existence of a change-oriented organizational culture construct, which I proposed is necessary for organizations today to embrace and succeed at constant change. Leveraging an existing approach for creating a unifying perspective on change-oriented cultures may be considered a strength, as researchers have demonstrated prior success with taking items from existing measures to create the new one. As noted, this strength may have also presented a disadvantage; that being the high redundancy between existing measures of culture. By integrating streams of research on organizational culture change, this study pushes the conversation on organizational change

forward by forcing researchers to question whether change success requires a different culture to begin with – heretofore, the conversation has simply been “how do we change an existing culture?” and not “what kind of culture makes change successful?” One can also consider the sample a strength of the study, in that collecting data from MTurk did provide diverse responses, more so than having measured a single organization.

To collect additional validity evidence for my construct and measure, researchers should use the change-orientation scale in an organizational setting, and across multiple organizations to compare results and refine the measure. Although MTurk allows for data collection across organizations, sample characteristics prevent the aggregation of data to a higher level. By collecting data from multiple organizations, researchers can examine the scale in a multilevel study, which has the following benefits: (1) Organizational change is inherently a multi-level phenomenon (Caldwell et al., 2004) in that change involves group level characteristics and environmental factors, as well as individual level (i.e., employee specific) contributions (Rafferty, Jimmieson, & Armenakis, 2013), (2) organizational culture is also a multi-level concept in that it refers to the collective understanding and perception of the organization (Schein, 2004), even though individual attitudes and beliefs are what form that collective perception, and (3), advances in multi-level modeling (Bliese, Chan, & Ployhart, 2007) now allow researchers to better understand how organizations truly operate through employees, teams, departments, and as a whole.

Scholars have advocated that organizational culture should be measured using a mixed-methods approach to get the most accurate picture of how an organization operates. Therefore, researchers should conduct qualitative research examining change-oriented cultures, using the framework of change-oriented cultures as a guide when coding interviews or narratives. In

addition to mix-methods studies, researchers should also investigate the relationship between change-oriented culture and change success variables in a longitudinal study. Organizational changes take time and are inherently process-based rather than single time-point instances. Thus, researchers should capture the effects of change-oriented cultures on the organizational change efforts dynamically, assessing their interplay over time.

### **Implications for Science and Practice**

Previously, organizational cultures scholars addressed organizational change in a partial or indirect manner (e.g., CWF; Quinn & McGrath, 1985). Although valuable because they offer a global, overarching framework, these existing cultural frameworks are deficient in their focus on organizational change, which I argue is essential in today's organizational climate. In this study, I synthesized change-related concepts across multiple cultural frameworks to propose a new and specific cultural dimension: change-oriented organizational culture. This construct furthers our understanding of what organizational culture must look like to keep employees ready and committed to organizational changes, thereby increasing the probability of effective organizational change interventions. Moreover, the results from this study indicate that change-oriented organizational culture may be a better predictor of organizational change attitudes and organizational outcomes than existing cultural frameworks that include some facets about change (e.g., Innovative Culture; Wallach, 1983). By drawing from multiple cultural frameworks, as well as literature on organizational change attitudes, I expanded existing cultural and organizational change literature to show how the two, culture and change, interact. Additionally, by asserting that culture is a valuable *antecedent* to organizational change, I took an approach seldom seen, if ever, in the organizational change literature where culture is the target of

organizational changes (Martins, 2011). Hence, the implication of my study for science is in advancing the dialogue of organizational culture change.

The implications of my research to practice include that a change-oriented culture can be a useful measure for anyone looking to engage in organizational changes, or sustain organizational change. Attitudes, such as organizational change cynicism are important predictors of turnover intentions during organizational changes (Albrecht & Travaglione, 2003), specifically long-term changes (Weston, 2018). Change-oriented organizational culture relates to relevant change-related attitudes, such as change-cynicism, and also relates to organizational outcomes better than existing cultural frameworks that include some element focusing on organizational change. Thus, practitioners hoping to affect employees positively during organizational change should focus on how change oriented a specific culture is. Although changing a culture is a difficult task no matter what (Schein, 2004), the wording of items from the scale for a change-oriented culture makes it clear where practitioners should focus their efforts. Namely, instead of solely asking about values, the scale also covers more tangible foci, such as reward structures, resources spent on training and development, and leadership behaviors. The practical nature of these questions lends itself to practitioners hoping to aide in organizational change efforts by creating a highly change-oriented culture.

## **Conclusion**

As organizational leaders seek to successfully implement organizational changes, they should first take a look in the mirror to see if they are set up for success. Organizations with change-oriented cultures are primed and ready to undertake organizational changes as a part of their normal business processes. The results of this study include the development and testing of a measure for change-oriented cultures that can be used by researchers and practitioners alike.

Furthermore, as evidenced in my study, employees in these change-oriented organizations hold positive attitudes toward change, and consistently engage in change-related behaviors, thereby improving the chances of organizational change success. Thus, academics and practitioners can use the study results to inform their change studies and change efforts. Importantly, I introduced a new construct and approach to organizational change that makes a significant contribution to the literature and theory on organizational change, moving the change conversation a step forward.

Table 1

*Existing cultural frameworks' conceptualizations of change-orientation*

		Cultural Framework				
		Denison & Mishra (1995) – Adaptive	Watkins & Marsick (1993) – Learning Organization	Quinn & Campbell – Adhocracy	Wallach (1983) - Innovative	O’Reilly, Chatman & Caldwell (1991) – Innovation and Risk Taking
Defining Characteristics		<ul style="list-style-type: none"> <li>• <b>Flexibility</b> and change</li> <li>• Externally oriented – driven by external environment and marked forces.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous Learning</li> <li>• Question and inquiry oriented</li> <li>• Team and group learning and collaboration</li> <li>• <b>Sharing a vision and incorporating feedback</b></li> <li>• <b>Systems and structures</b></li> <li>• Externally oriented</li> <li>• Strategy driven</li> </ul>	<ul style="list-style-type: none"> <li>• Creation</li> <li>• <b>Adaptability</b></li> <li>• <b>Creativity</b></li> <li>• <b>Agility</b></li> <li>• Goals of <b>innovation</b> and competitive cutting edge</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Risk taking</b></li> <li>• Results-oriented</li> <li>• <b>Creative</b></li> <li>• Pressure</li> <li>• Stimulating</li> <li>• Challenging</li> <li>• <b>Enterprising</b></li> <li>• Driving</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Innovation</b></li> <li>• Opportunity</li> <li>• Experimentation</li> <li>• <b>Risk Taking</b></li> <li>• Careful (-)</li> <li>• <b>Rule Oriented (-)</b></li> <li>• <b>Stability (-)</b></li> <li>• Security (-)</li> <li>• <b>Highly Organized (-)</b></li> </ul>

*Note.* Bold = Common themes identified as characteristic of change-oriented cultures.



Table 2

*Item Means, Variances and Corrected Item-Total Correlations for the Initial 82 Items*

Item Number and Content	M	$\sigma$	<i>r</i>
1. The organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.	3.96	1.74	0.64
2. The environment of the organization is highly stimulating.	4.60	1.63	0.75
3. The management style in the organization allows for employees to have a high amount of freedom.	4.38	1.73	0.66
4. Employees are able to express their views and feelings about how rewards are given.	4.40	1.65	0.67
5. Employees have an influence on what benefits are given.	3.85	1.77	0.59
6. Procedures to give rewards to employees are applied consistently.	4.45	1.74	0.80
7. Procedures to give rewards to employees are based on accurate information.	4.83	1.52	0.75
8. Employees are not able to question the procedure to give rewards. (r)	4.03	1.83	0.54
9. The procedures to give rewards to employees uphold ethical and moral standards.	4.81	1.60	0.76
10. Procedures to give rewards to employees are free of bias.	4.43	1.73	0.76
11. The rewards I am given directly reflect the effort I put into my work.	4.57	1.80	0.79
12. The rewards I am given are appropriate for the work I complete.	4.67	1.76	0.81
13. The rewards I am given reflect what I have contributed to the organization.	4.57	1.76	0.78
14. The rewards I am given are not justified, given my performance. (r)	4.85	1.76	0.34
15. The organization emphasizes acquiring new resources and creating new challenges.	4.85	1.54	0.58
16. Trying new things and prospecting for opportunities are valued.	4.68	1.52	0.69
17. The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator.	3.91	1.76	0.54
18. This organization values experimentation.	4.19	1.68	0.63
<b>19. This organization places an emphasis on careful actions. (r)</b>	<b>2.72</b>	<b>1.38</b>	<b>-0.26</b>
<b>20. The term rule-oriented describes this organization. (r)</b>	<b>2.94</b>	<b>1.42</b>	<b>-0.14</b>
<b>21. This organization is highly organized in its structure. (r)</b>	<b>3.06</b>	<b>1.64</b>	<b>-0.50</b>

*Note.* M = Mean.  $\sigma$  = Standard Deviation. *r* = Corrected Item-Total Correlation. (r) = Reverse Coded. Bold items were removed because of the Corrected Item-Total Correlation. Responses recorded on a 7 point Likert-Type scale, 1 = *Strongly Disagree*, 7 = *Strongly Agree*.

Table 2 (continued)

*Item Means, Variances and Corrected Item-Total Correlations for the Initial 82 Items*

Item Number and Content	M	$\sigma$	<i>r</i>
In this organization...			
<b>22. We work with multiple departments/teams to get things done.</b>	<b>5.60</b>	<b>1.39</b>	<b>0.36</b>
<b>23. Employees resist when changes are proposed. (r)</b>	<b>4.11</b>	<b>1.71</b>	<b>0.40</b>
24. We constantly are revising and improving the way we work.	5.09	1.51	0.69
<b>25. We are motivated by outsider competition.</b>	<b>4.49</b>	<b>1.78</b>	<b>0.39</b>
26. Procedures are flexible so that they can be changed easily.	3.95	1.69	0.59
27. Employees are encouraged to deal directly with customers.	5.31	1.64	0.46
28. All employees are kept up to date on customer preferences and changes.	4.70	1.70	0.68
29. We are kept up to date on what all roles in the company are doing.	4.44	1.79	0.69
30. Development and learning is a part of our everyday goals.	5.08	1.61	0.72
<b>31. We are not organized enough to keep track of everything. (r)</b>	<b>4.78</b>	<b>1.86</b>	<b>0.34</b>
32. Mistakes are seen as learning and growth areas.	4.63	1.57	0.66
<b>33. Management values stability. (r)</b>	<b>2.83</b>	<b>1.48</b>	<b>-0.53</b>
34. The leadership is generally considered to display an entrepreneurial spirit.	4.41	1.65	0.74
35. We appreciate and reward risk taking behaviors.	3.66	1.63	0.67
36. Leaders display innovative behaviors.	4.58	1.73	0.84
37. Uniqueness is rewarded.	4.12	1.72	0.78
38. The glue that holds the organization together is commitment to innovation and development.	4.36	1.67	0.82
39. This organization emphasizes being on the cutting edge.	4.52	1.74	0.71
40. Employees and managers are enterprising.	4.60	1.56	0.82
41. We value creativity.	4.67	1.74	0.85
42. Employees receive information in a timely manner.	4.58	1.75	0.90
43. Employees consistently receive useful communication.	4.64	1.74	0.89
44. Employees' questions are adequately answered.	4.74	1.67	0.87
45. Sufficient advanced notice is given to employees about any organizational changes.	4.43	1.76	0.84

*Note.* M = Mean.  $\sigma$  = Standard Deviation. *r* = Corrected Item-Total Correlation. (r) = Reverse Coded. Bold items were removed because of the Corrected Item-Total Correlation. Responses recorded on a 7 point Likert-Type scale, 1 = *Strongly Disagree*, 7 = *Strongly Agree*.

Table 2 (continued)

*Item Means, Variances and Corrected Item-Total Correlations for the Initial 82 Items*

Item Number and Content	M	$\sigma$	<i>r</i>
Please rate your level of agreement or disagreement with whether or not these statements describe the leadership at your organization:			
46. Employees have ample opportunities for input.	4.61	1.69	0.83
47. The organization keeps everyone fully informed.	4.46	1.81	0.88
48. If changes are necessary, employees are provided an adequate explanation.	4.55	1.72	0.86
49. I receive adequate information about any forthcoming changes.	4.57	1.77	0.87
50. Leaders at this organization have a clear understanding of where we are going.	5.03	1.49	0.82
51. Leaders at this organization paint an interesting picture of the future for our group.	4.84	1.57	0.75
52. Leaders are always seeking new opportunities for the organization.	5.12	1.50	0.71
53. Leaders at this organization inspire others with his/her plans for the future.	4.58	1.74	0.82
54. Leaders are able to get others committed to their dream.	4.71	1.53	0.81
55. Leaders act without considering my feelings. (r)	4.52	1.85	0.63
56. Leaders show respect for my personal feelings.	4.88	1.68	0.84
57. Leaders behave in a manner thoughtful of my personal needs.	4.65	1.71	0.87
58. Leaders treat me without considering my personal feelings. (r)	4.65	1.82	0.56
59. Leaders at this organization treat me in a polite manner.	5.43	1.53	0.80
60. Leaders at this organization treat me with dignity.	5.25	1.55	0.84
61. Leaders at this organization treat me with respect.	5.28	1.62	0.86
62. Leaders at this organization do not make improper remarks or comments to me.	5.34	1.69	0.56
63. Leaders at this organization are candid in their communications with me.	4.86	1.56	0.71
64. Leaders at this organization thoroughly explain organizational matters.	4.54	1.76	0.83

*Note.* M = Mean.  $\sigma$  = Standard Deviation. *r* = Corrected Item-Total Correlation. (r) = Reverse Coded. Bold items were removed because of the Corrected Item-Total Correlation. Responses recorded on a 7 point Likert-Type scale, 1 = *Strongly Disagree*, 7 = *Strongly Agree*.

Table 2 (continued)

*Item Means, Variances and Corrected Item-Total Correlations for the Initial 82 Items*

Item Number and Content	M	$\sigma$	<i>r</i>
In this organization we...			
65. Leaders at this organization offer reasonable explanations regarding organizational matters.	4.73	1.67	0.83
66. Leaders at this organization communicate details on organization matters in a timely manner.	4.68	1.71	0.81
67. Leaders at this organization tailor communications to individuals' specific needs.	4.29	1.72	0.74
68. Embrace mistakes as learning opportunities.	4.63	1.58	0.80
69. Focus on what skills employees will need in the future.	4.80	1.65	0.80
70. Assist in each-others learning.	5.07	1.57	0.78
71. Provide adequate resources to pursue individual development.	4.54	1.74	0.81
72. Allow employees to take time away from their jobs to pursue learning goals.	4.31	1.73	0.68
73. Consider obstacles and setbacks to be learning opportunities.	4.65	1.58	0.83
74. Give employees rewards (e.g., money, recognition, etc.) for learning new skills.	4.08	1.88	0.75
75. Actively seek feedback from employees on ways to improve.	4.59	1.75	0.87
76. Encourage a discussion between employee and management.	4.79	1.68	0.80
77. Communicate important information efficiently.	4.66	1.78	0.77
78. Keep track of areas of strength and weaknesses for future employee development.	4.72	1.68	0.81
79. Use a system to identify where employees currently are vs. where they need to be.	4.55	1.72	0.70
80. Openly communicate information on past failures and setbacks to improve in the future.	4.76	1.71	0.78
81. Track the effects of training and development.	4.76	1.68	0.76
82. Track the resources we spend on training and development.	5.08	1.56	0.62

*Note.* M = Mean.  $\sigma$  = Standard Deviation. *r* = Corrected Item-Total Correlation. (r) = Reverse Coded. Bold items were removed because of the Corrected Item-Total Correlation. Responses recorded on a 7 point Likert-Type scale, 1 = *Strongly Disagree*, 7 = *Strongly Agree*.

Table 3

*Eigenvalues from Exploratory Factor Analysis and Parallel Analysis*

Factor	Eigenvalue	
	Exploratory Factor Analysis	Parallel Analysis
1	32.394	2.02567
2	2.787	1.92020
3	1.942	1.85179
4	1.420	1.79111
5	1.391	1.74216
6	1.205	1.69151
7	1.150	1.64465
8	0.907	1.59772
9	0.823	1.55881
10	0.791	0.82575

Table 4

*Factor Loadings from a Six Factor Exploratory Factor Analysis*

Item	Factor Loadings					
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
1 <sup>B</sup>	0.155	<b>0.409</b>	0.082	<b>0.318</b>	0.035	-0.024
2	0.181	<b>0.504</b>	0.117	0.13	0.025	-0.017
3 <sup>A</sup>	0.099	0.25	0.275	0.264	-0.013	0.124
4 <sup>B</sup>	<b>0.417</b>	0.06	0.072	<b>0.504</b>	0.002	0
5 <sup>B</sup>	<b>0.364</b>	0.019	-0.025	<b>0.496</b>	0.162	-0.058
6	<b>0.632</b>	-0.054	0.154	0.174	0.098	0.032
7	<b>0.771</b>	0.134	-0.006	0.024	-0.019	0.027
8 <sup>B</sup>	<b>0.301</b>	0.007	0.158	<b>0.386</b>	-0.008	-0.035
9	<b>0.749</b>	0.101	0.049	-0.042	0.034	0.006
10	<b>0.669</b>	-0.002	0.248	0.129	-0.104	-0.022
12	<b>0.468</b>	0.009	0.218	0.162	0.11	0.025
15	0.13	<b>0.722</b>	-0.221	-0.02	0.104	-0.018
16	0.066	<b>0.793</b>	-0.036	0.201	-0.076	0.03
17	-0.033	<b>0.709</b>	-0.25	0.19	0.112	-0.031
18	-0.17	<b>0.811</b>	-0.018	0.217	-0.055	0.079
24	-0.039	<b>0.665</b>	0.027	-0.121	0.198	-0.164
26 <sup>B</sup>	-0.141	<b>0.408</b>	0.183	<b>0.317</b>	0.069	-0.01
27 <sup>C</sup>	0.127	<b>0.346</b>	-0.085	-0.026	0.153	-0.141
28	0.098	0.241	<b>0.38</b>	0.072	0.124	-0.288
29	0.033	0.189	<b>0.686</b>	0.043	0.013	-0.361
30 <sup>B</sup>	0.01	<b>0.547</b>	-0.042	-0.108	<b>0.382</b>	-0.096
32	0.043	0.268	0.081	0.149	<b>0.336</b>	0.076
34	0.081	<b>0.634</b>	0.074	0.147	-0.051	-0.013
35 <sup>B</sup>	-0.007	<b>0.349</b>	-0.031	<b>0.503</b>	0.159	0.002
36 <sup>B</sup>	0.075	<b>0.588</b>	<b>0.334</b>	-0.024	-0.009	-0.047
37 <sup>A</sup>	0.051	<b>0.452</b>	0.099	<b>0.333</b>	0.043	0.129
38	-0.126	<b>0.783</b>	0.22	0.024	-0.042	0.002
39	-0.047	<b>0.77</b>	0.101	-0.007	-0.027	-0.08
40 <sup>B</sup>	0.041	<b>0.519</b>	<b>0.355</b>	0.057	-0.032	0.027

*Note.* Item = Original Item Number. Bolded Numbers are Factor Loadings above .3. <sup>A</sup> = Low Loading Item. <sup>B</sup> = Cross-Loading Item. <sup>C</sup> = Item removed for low corrected item total correlation among highly correlated items.

Table 4 (continued)

*Factor Loadings from a Six Factor Exploratory Factor Analysis*

Item	Factor Loadings					
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
41	-0.036	<b>0.713</b>	0.076	0.099	0.094	0.076
44	0.02	0.002	<b>0.846</b>	0.027	0.02	-0.013
45	-0.006	-0.071	<b>0.963</b>	-0.006	-0.022	-0.161
46	0.049	0.055	<b>0.552</b>	0.211	0.162	0.071
47	-0.064	0.06	<b>0.954</b>	0.009	0.036	-0.33
48	0.121	-0.054	<b>0.85</b>	-0.025	0.017	-0.066
50 <sup>B</sup>	0.187	<b>0.344</b>	<b>0.428</b>	-0.216	0.078	0.049
51 <sup>C</sup>	0.152	<b>0.483</b>	0.202	-0.131	0.114	0.052
52	0.041	<b>0.774</b>	0.038	-0.192	0.039	0.175
53 <sup>B</sup>	0.139	<b>0.415</b>	<b>0.398</b>	-0.026	0.019	0.048
55 <sup>C</sup>	0.01	-0.034	<b>0.518</b>	0.053	0.032	0.228
57 <sup>C</sup>	0.101	0.091	<b>0.56</b>	0.059	0.041	0.273
58 <sup>C</sup>	-0.054	0.016	<b>0.406</b>	0.066	0.05	0.256
61 <sup>B</sup>	<b>0.378</b>	0.07	<b>0.305</b>	-0.027	0.1	<b>0.322</b>
62 <sup>B</sup>	<b>0.385</b>	0.094	0.031	-0.08	0.051	<b>0.342</b>
63	0.08	-0.014	<b>0.555</b>	-0.029	0.168	0.031
65	0.106	0.046	<b>0.764</b>	-0.063	-0.008	0.081
67	-0.003	0.137	<b>0.408</b>	0.104	0.155	0.2
69	0.013	0.062	0.113	0.046	<b>0.687</b>	0.04
70	0.054	0.011	0.186	0.003	<b>0.58</b>	0.13
71 <sup>B</sup>	-0.049	0.065	<b>0.34</b>	0.041	<b>0.542</b>	-0.017
72	0.002	0.033	0.005	0.148	<b>0.569</b>	0.17
73	-0.021	0.111	0.163	0.029	<b>0.57</b>	0.182
74	0.159	0.024	0.152	0.201	<b>0.462</b>	-0.028
75 <sup>B</sup>	-0.056	0.029	<b>0.526</b>	0.067	<b>0.427</b>	0.047
76	0.056	0.063	<b>0.519</b>	-0.033	0.3	0.043
78	0.032	-0.01	0.165	0.004	<b>0.711</b>	0.055
79	0.027	-0.058	0.029	0.044	<b>0.788</b>	-0.034
80 <sup>B</sup>	0.06	0.009	<b>0.525</b>	-0.051	<b>0.351</b>	-0.015
81	0.024	0.035	0.19	-0.089	<b>0.685</b>	-0.045
82	0.108	-0.004	-0.067	-0.022	<b>0.72</b>	-0.046

*Note.* Item = Original Item Number. Bolded Numbers are Factor Loadings above .3. <sup>A</sup> = Low Loading Item. <sup>B</sup> = Cross-Loading Item. <sup>C</sup> = Item removed for low corrected item total correlation among highly correlated items.

Table 5

*Factor loadings for the final scale of change-oriented organizational culture (N=363)*

Item #	Item Content	Dimension and Factor Loading				
		Justice	Flex. & Innovation	Comm. & Leadership	Structure & Rules	Second-Order Factor
6	Procedures to give rewards to employees are applied consistently.	0.854				
7	Procedures to give rewards to employees are based on accurate information.	0.829				
9	The procedures to give rewards to employees uphold ethical and moral standards.	0.829				
10	Procedures to give rewards to employees are free of bias.	0.826				
12	The rewards I am given are appropriate for the work I complete.	0.801				
15	The organization emphasizes acquiring new resources and creating new challenges.		0.697			
16	Trying new things and prospecting for opportunities are valued.		0.848			
17	The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator.		0.669			
18	This organization values experimentation		0.776			
24	We constantly are revising and improving the way we work.		0.697			
34	The leadership is generally considered to display an entrepreneurial spirit.		0.74			
38	The glue that holds the organization together is commitment to innovation and development.		0.854			

*Note.* Flex. & Innovation = Flexibility and Innovation. Comm. & Leadership = Communication and Leadership. Item # Corresponds to the Original Item Pool.



Table 5 (Continued)

*Factor loadings for the final scale of change-oriented organizational culture (N=363)*

Item #	Item Content	Dimension and Factor Loading				
		Justice	Flex. & Innovation	Comm. & Leadership	Structure & Rules	Second-Order Factor
41	We value creativity.		0.887			
52	Leaders are always seeking new opportunities for the organization.		0.804			
28	All employees are kept up to date on customer preferences and changes.			0.685		
44	Employees' questions are adequately answered.			0.884		
45	Sufficient advanced notice is given to employees about any organizational changes.			0.831		
46	Employees have ample opportunities for input.			0.863		
47	The organization keeps everyone fully informed.			0.875		
48	If changes are necessary, employees are provided an adequate explanation.			0.873		
63	Leaders at this organization are candid in their communications with me.			0.737		
65	Leaders at this organization offer reasonable explanations regarding organizational matters.			0.857		
67	Leaders at this organization tailor communications to individuals' specific needs.			0.722		
69	Focus on what skills employees will need in the future.				0.856	
70	Assist in each-others' learning.				0.807	

*Note.* Flex. & Innovation = Flexibility and Innovation. Comm. & Leadership = Communication and Leadership. Item # Corresponds to the Original Item Pool.

Table 5 (Continued)

*Factor loadings for the final scale of change-oriented organizational culture (N=363)*

Item #	Item	Dimension and Factor Loading				
		Justice	Flex. & Innovation	Comm. & Leadership	Structure & Rules	Second-Order Factor
72	Allow employees to take time away from their jobs to pursue learning goals.				0.681	
73	Consider obstacles and setbacks to be learning opportunities.				0.829	
78	Keep track of areas of strength and weaknesses for future employee development.				0.873	
79	Use a system to identify where employees currently are vs. where they need to be.				0.767	
81	Track the effects of training and development.				0.819	
	Justice Dimension					0.852
	Flexibility and Innovation Dimension					0.823
	Communication and Leadership Dimension					0.956
	Structure and Rules Dimension					0.909

*Note.* Flex. & Innovation = Flexibility and Innovation. Comm. & Leadership = Communication and Leadership. Item # Corresponds to the Original Item Pool.

Table 6

*Fit Statistics for each Individual Construct in the Structural Equation Model*

Construct	Fit Statistic						
	$\chi^2$	df	RMSEA	CI	CFI	TLI	SRMR
Change-Oriented Organizational Culture	1208.26*	(460)	0.067	[0.062-0.072]	0.920	0.913	0.044
Commitment to Change	47.49*	(5)	0.153	[0.115-0.194]	0.969	0.939	0.023
Readiness for Change	463.89*	(148)	0.077	[0.069-0.085]	0.929	0.918	0.063
Resistance to Change	350.40*	(44)	0.139	[0.125-0.152]	0.909	0.887	0.050
Organizational Change Cynicism	26.87*	(9)	0.074	[0.043-0.107]	0.991	0.984	0.014
Perceptions of Change Success	17.20*	(2)	0.145	[0.087-0.211]	0.984	0.951	0.018
Organizational Change Behaviors	209.23*	(54)	0.089	[0.076-0.102]	0.924	0.907	0.046
Organizational Commitment	202.69*	(53)	0.088	[0.076-0.101]	0.953	0.942	0.034
Turnover Intentions	0	(0)	0	[0-0]	1	1	0
Wallach's Innovative Dimension	27.10*	(9)	0.074	[0.043-0.107]	0.982	0.97	0.027
Adhocracy Culture	91.40*	(5)	0.218	[0.180-0.258]	0.953	0.906	0.032
Learning Organization	535.31*	(182)	0.073	[0.066-0.080]	0.947	0.939	0.033

Note: N=363.  $\chi^2$  = Chi-Square Statistic. df = Degrees of Freedom for the Chi-Square Statistic. RMSEA = Root Mean Square Error of Approximation. CI = Confidence Interval for the Root Mean Square Error of Approximation. CFI = Comparative Fit Index. TLI = Tucker-Lewis Index. SRMR = Standardized Root Mean Square Residual. \* =  $p < .001$ .

Table 7

*Construct Level Correlations and Comparisons*

Construct	Correlations and z-scores						
	Change-Oriented <i>r</i>	Adhocracy <i>r</i>	Z-score	DLOQ <i>r</i>	Z-score	Innovation <i>r</i>	Z-score
Change-Oriented Culture		0.823		0.976		0.846	
Affective Commitment to Change	0.465	0.317	5.222	0.448	1.659	0.346	4.519
Readiness for Change	0.566	0.399	6.277	0.530	3.760	0.433	5.390
Change Cynicism	-0.687	-0.494	8.119	-0.624	7.502	-0.518	7.662
Resistance to Change	-0.435	-0.283	5.278	-0.399	3.445	-0.294	5.255
Perceptions of Change Success	-0.420	-0.273	5.071	-0.379	3.892	-0.279	4.561
Change-Related Behaviors	0.547	0.433	4.267	0.519	2.883	0.468	3.193
Turnover Intentions	-0.627	-0.484	5.696	-0.599	3.096	-0.534	4.020
Organizational Commitment	0.686	0.582	4.480	0.674	1.427	0.616	3.269

*Note.* *r* = correlations. Change-Oriented = Change-Oriented Culture. Adhocracy = Adhocracy Dimension of the Competing Values Framework. DLOQ = Learning Organizational Culture. Innovation = Innovation Dimension of Wallach's Culture Measure. Z-score = Z-score calculated from dependent variables.

Table 8

*Path Coefficients for Conditions 4-6*

Condition	Standardized	Unstandardized
	Readiness for Change	
4a. Change-Oriented Culture	.738 (.041)*	1.002 (.095)*
	Commitment to Change	
4b. Change-Oriented Culture	.619 (.035)*	.945 (.102)*
	Resistance to Change	
5a. Change-Oriented Culture	-.589 (.040)*	-.756 (.090)*
	Change Cynicism	
5b. Change-Oriented Culture	-.779 (.026)*	-1.249 (.103)*
	Change-Related Behaviors	
6a. Change-Oriented Culture	-.029 (.085)	-.033 (.096)
	Organizational Commitment	
6b. Change-Oriented Culture	.564 (.081)*	.746 (.128)*
	Perceptions of Change Success	
6c. Change-Oriented Culture	.039 (.072)	.059 (.109)
	Turnover Intentions	
6d. Change-Oriented Culture	-.425 (.086)*	-.810 (.178)*

*Note.* 4a – 6d refer to paths in Figure 1. Standardized = Standardized Path Coefficients. Unstandardized = Unstandardized Path Coefficients. Standard Errors are in Parentheses.

\* =  $p < .001$ .

Table 9

*Path coefficients between organizational change attitudes and outcomes*

Independent Variable	Outcome Variable
	Organizational Commitment
Readiness for Change	-.003 (.113)
Commitment to Change	.188 (.097)
Resistance to Change	.142 (.081)
Change Cynicism	-.147 (.077)
	Turnover Intentions
Readiness for Change	.102 (.121)
Commitment to Change	.014 (.106)
Resistance to Change	.133 (.087)
Change Cynicism	.330 (.081)*
	Change-Related Behaviors
Readiness for Change	.897 (.086)*
Commitment to Change	-.050 (.094)
Resistance to Change	-.065 (.074)
Change Cynicism	.009 (.069)
	Perceptions of Change Success
Readiness for Change	-.088 (.099)
Commitment to Change	-.028 (.087)
Resistance to Change	.093 (.067)
Change Cynicism	.783 (.050)*

*Note.* Standard Errors are in Parentheses. \* =  $p < .001$

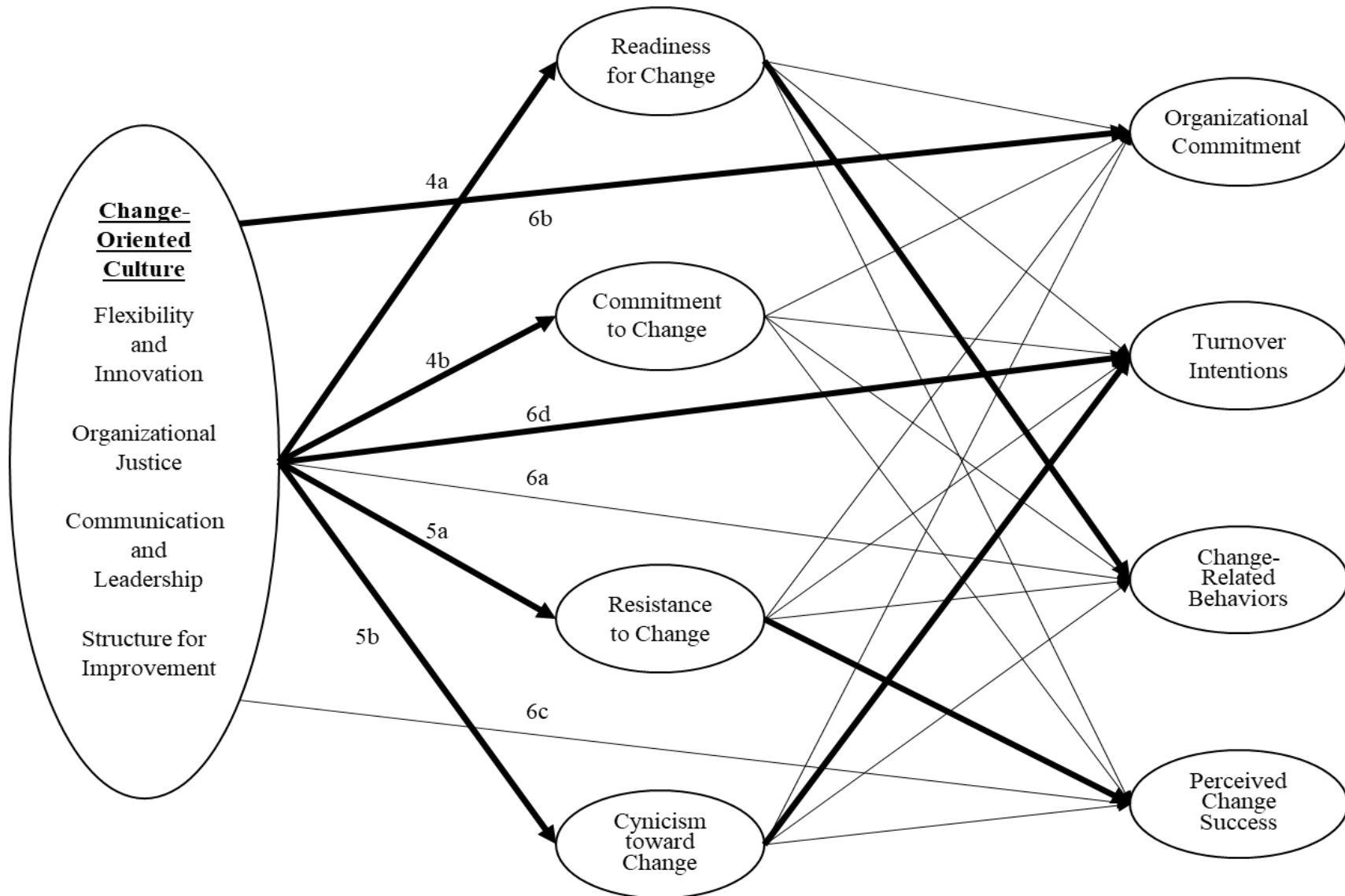


Figure 1. Change-oriented culture, mediating attitudes, and outcomes.  
 Note. **Bold** =  $p < .001$ .

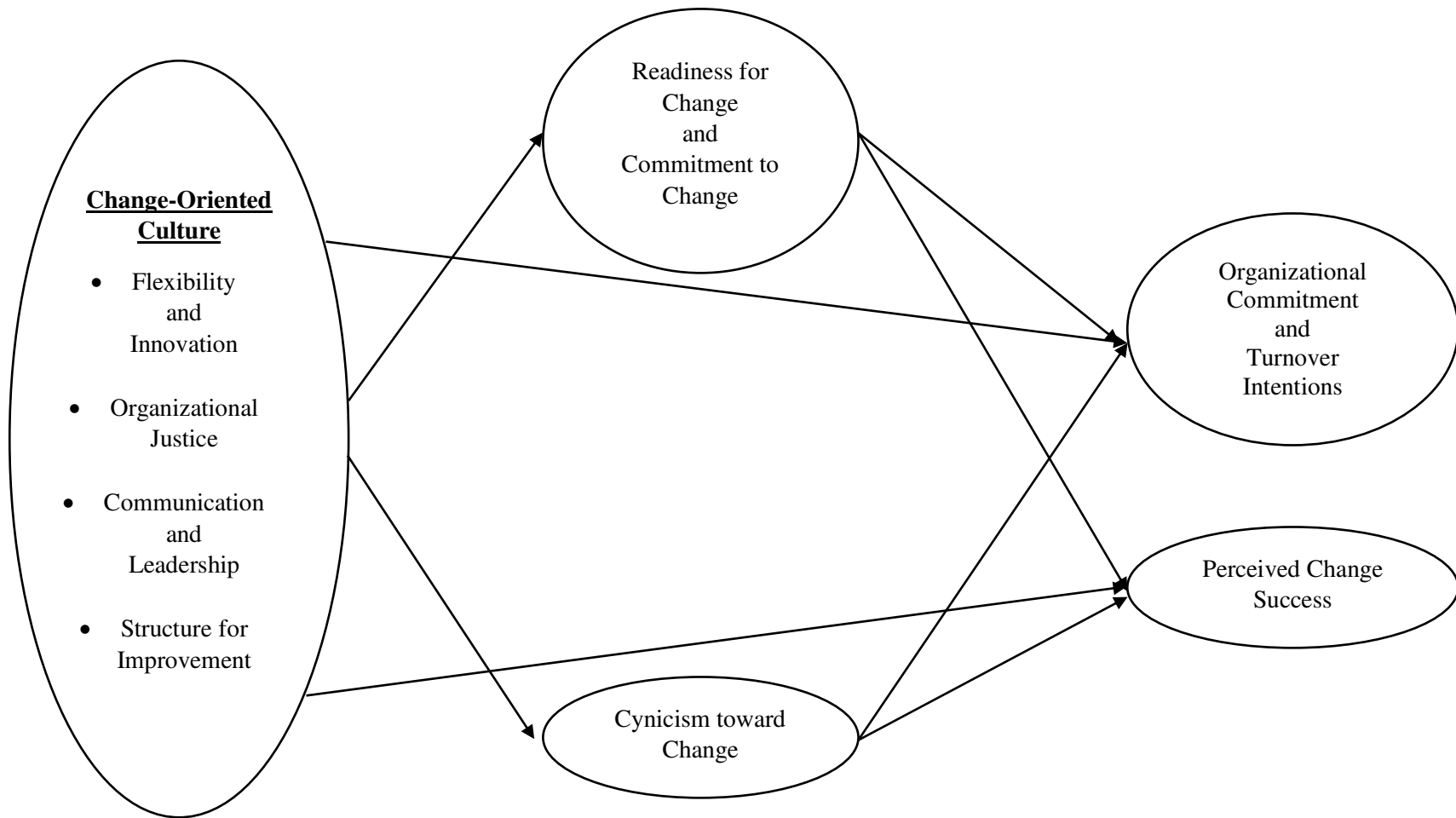


Figure 2. A simplified alternate structural equation model of change-oriented culture, mediating attitudes, and outcomes.



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## Appendix A

### Participant Instructions and Preliminary Questions:

Organizational change(s) can include actions such as adopting new technology that substantially changes work, mergers and acquisitions, re-branding/new marketing that affects your job, launching a new product line, changing the strategy of the organization, changing job responsibilities, etc.

Is the organization you just named going through organizational change(s), or has it in the past 12 months gone through organizational change(s)?

No

Yes

The following questions ask you to reflect on the organization you identified previously as having gone through - or as currently going through - significant organizational changes. We encourage you to read each statement carefully, as your response options may change throughout the survey. Please respond as honestly as possible.

Please enter the name of that organization here (this will be used for research purposes only and will remain confidential, only noted by the researchers).

What is the organizational change that you were referring to with this organization? Again, this information is for research purposes only and will remain confidential.

The following questions ask you to reflect on the organization you identified previously as having gone through, or currently going through significant organizational changes.

## Appendix B

*Note.* Items in bold were used for the initial item pool for a change-oriented organizational culture. For all questions (r) means reverse coded.

### Full Organizational Culture Measures

#### Denison and Mishra's Adaptive Dimension (Weston, 2018)

1-7 Likert Strongly Disagree to Strongly Agree

1. **Development and learning is a part of our everyday goals.**
2. **We are not organized enough to keep track of everything. (r)**
3. **Mistakes are seen as learning and growth areas.**
4. **We work with multiple departments/teams to get things done.**
5. **Employees resist when changes are proposed. (r)**
6. **We constantly are revising and improving the way we work.**
7. **We are motivated by outsider competition.**
8. **Procedures are flexible so that they can be changed easily.**
9. **Employees are encouraged to deal directly with customers.**
10. **All employees are kept up to date on customer preferences and changes.**
11. **We are kept up to date on what all roles in the company are doing.**
12. **We appreciate and reward risk taking behaviors.**

#### Wallach's (1983) Three Cultural Dimensions

0-4 Likert Does not describe my organization – Describes my organization most of the time.

1. Risk taking
2. Results-oriented
3. **Creative**
4. Pressurized
5. **Stimulating**
6. Challenging
7. **Enterprising**
8. Driving
9. Collaborative
10. Relationships-oriented
11. Encouraging
12. Sociable
13. Personal freedom
14. Equitable
15. Safe
16. Trusting
17. Hierarchical
18. Procedural

19. Structured
20. Ordered
21. Regulated
22. Established, solid
23. Cautious
24. Power-oriented

Adhocracy Dimension of the CVF (Cameron & Quinn, 2011)

1-7 Likert Strongly Disagree to Strongly Agree

- 1. The organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.**
- 2. The leadership in the organization is generally considered to exemplify entrepreneurship, innovation, or risk taking.**
- 3. The management style in the organization is characterized by individual risk taking, innovation, freedom, and uniqueness.**
- 4. The glue that holds the organization together is commitment to innovation and development. There is an emphasis on being on the cutting edge.**
- 5. The organization emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.**
- 6. The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator.**

Structure and Systems & Sharing a Vision and Incorporating Feedback Dimensions of Learning Organizations (Weston, 2018)

1-7 Likert Strongly Disagree to Strongly Agree

- 1. At this organization we:**
- 2. Assist in each-others' learning.**
- 3. Provide adequate resources to pursue individual development.**
- 4. Allow employees to take time away from their jobs to pursue learning goals.**
- 5. Consider obstacles and setbacks to be learning opportunities.**
- 6. Give employees rewards (e.g., money, recognition, etc.) for learning new skills.**
- 7. Actively seek feedback from employees on ways to improve.**
- 8. Keep track of areas of strength and weaknesses for future employee development.**
- 9. Use a system to identify where employees currently are vs. where they need to be.**
- 10. Track the effects of training and development.**
- 11. Track the resources we spend on training and development.**
- 12. Embrace mistakes as learning opportunities.**
- 13. Focus on what skills employees will need in the future.**
- 14. Encourage a discussion between employee and management.**
- 15. Communicate important information efficiently.**
- 16. Openly communicate information on past failures and setbacks to improve in the future.**

Organizational Culture Profile (O'Reilly et al., 1991)

Q-Sort Technique

Please sort the following statements from least to most characteristic of your organization.

1. Flexibility
2. Adaptability
3. Offers praise for good performance
4. Predictability
5. Being innovative
6. Being quick to take advantage of opportunities
- 7. A willingness to experiment**
8. Risk-Taking
9. Autonomy
- 10. Being careful (r)**
- 11. Being rule-oriented (r)**
12. Being analytical
13. Paying attention to detail
14. Being precise
15. Being team oriented
16. Sharing information freely
17. Respect for individual's rights
18. Being people oriented
19. Fairness
20. Having high expectations for performance
21. Informality
22. Being easy going
23. Being calm
24. Being supportive
25. Being aggressive
26. Decisiveness
27. Action oriented
28. Taking initiative
29. Being reflective
30. Achievement orientation
31. Having a clear guiding philosophy
32. Taking individual responsibility
33. Having a good reputation
34. Opportunities for professional growth
35. Hi pay for good performance
36. Security of employment
- 37. Stability (r)**
38. Low level of conflict

39. Confronting conflict directly
40. Working in collaboration with others
41. Sitting in
42. Developing friends at work
43. Enthusiasm for the job
44. Working long hours
45. Not being constrained by many rules
46. An emphasis on quality
47. Being demanding
48. Being distinctive-different from others
49. Being socially responsible
50. Being results-oriented
51. Tolerance
52. Being competitive
- 53. Being highly organized (r)**
54. Emphasizing a single culture throughout the organization

#### Other Measures Used to Create Change-Oriented Culture

##### Organizational Justice (Colquitt, 2001)

1-7 Likert Strongly Disagree to Strongly Agree

- 1. Employees are able to express their views and feelings about how rewards are given.**
- 2. The rewards I am given reflect what I have contribute to the organization.**
- 3. The rewards I am given are not justified, given my performance. (r)**
- 4. Employees have an influence on what benefits are given.**
- 5. Procedures to give rewards to employees are applied consistently.**
- 6. Procedures to give rewards to employees are free of bias.**
- 7. Procedures to give rewards to employees are based on accurate information.**
- 8. Employees are not able to question the procedure to give rewards. (r)**
- 9. The procedures to give rewards to employees uphold ethical and moral standards.**
- 10. The rewards I am given directly reflect the effort I put into my work.**
- 11. The rewards I am given are appropriate for the work I complete.**
- 12. Leaders at this organization treat me in a polite manner.**
- 13. Leaders at this organization treat me with dignity.**
- 14. Leaders at this organization treat me with respect.**
- 15. Leaders at this organization do not make improper remarks or comments to me.**
- 16. Leaders at this organization are candid in their communications with me.**
- 17. Leaders at this organization thoroughly explain organizational matters.**
- 18. Leaders at this organization offer reasonable explanations regarding organizational matters.**

- 19. Leaders at this organization communicate details on organization matters in a timely manner.**
- 20. Leaders at this organization tailor communications to individuals' specific needs.**

Podsakoff et al., 1990 (Inspirational motivation and support)

1-7 Likert Strongly Disagree to Strongly Agree

Please rate your level of agreement or disagreement with whether or not these statements describe your organization:

- 1. Has a clear understanding of where we are going.**
- 2. Paints an interesting picture of the future for our group.**
- 3. Is always seeking new opportunities for the organization.**
- 4. Inspires others with his/her plans for the future.**
- 5. Is able to get others committed to his/her dream.**
- 6. Acts without considering my feelings. (r)**
- 7. Shows respect for my personal feelings.**
- 8. Behaves in a manner thoughtful of my personal needs.**
- 9. Treats me without considering my personal feelings. (r)**

Quality of Communication - Information (Wanberg & Banas, 2000)

1-7 Likert Strongly Disagree to Strongly Agree

- 1. The information I have received about the changes has been timely.**
- 2. The information I have received about the changes has been useful.**
- 3. The information I have received has adequately answered my questions about the changes.**
- 4. I have received adequate information about the forthcoming changes**

Characteristics of Change (Caldwell et al., 2004)

1-7 Likert Strongly Disagree to Strongly Agree

- 1. Sufficient advanced notice was given to employees affected by the change.**
- 2. Those affected by the change had ample opportunities for input.**
- 3. The organization kept everyone fully informed during the change.**
4. Sufficient resources were available to support this change.
5. All levels of management were committed to this change.
6. People affected negatively by this change were treated fairly.
7. Management dealt quickly and effectively with “surprises” during this change.
- 8. An adequate explanation for why change was necessary was provided to employees.**
9. There was sufficient Management support for this change.
10. Top management was supportive of this change.



## Attitudes toward Organizational Change Measures

*Note.* Any items removed for analysis in the structural equation model are noted with <sup>D</sup>.

### Herscovitch & Meyer, 2002 (Commitment to Change)

1-7 Likert Strongly Disagree to Strongly Agree

Please rate your level of agreement or disagreement with whether or not these statements describe your organization:

1. I believe in the value of this change.
2. This change is a good strategy for this organization. <sup>D</sup>
3. I think that management is making a mistake by introducing this change. (r)
4. This change serves an important purpose. <sup>D</sup>
5. Things would be better without this change. (r)
6. This change is not necessary. (r)

### Holt et al., 2007 (Change Readiness)

1-6 Likert Strongly Disagree to Strongly Agree

Please rate your level of agreement or disagreement with whether or not these statements describe your organization:

1. The organization will benefit from this change.
2. It does not make much sense for us to initiate this change. <sup>D</sup>
3. There are legitimate reasons for us to make this change.
4. I do not understand the reasons for the organization making the change.
5. This change will improve our organization's overall efficiency. <sup>D</sup>
6. In the long run, I feel it will be worthwhile for me if the organization adopts this change.
7. This change will make my job easier.
8. My supervisor has encouraged all of us to embrace this change.
9. I do not believe there is anything for me to gain with this change.
10. The time we are spending on this change should be spent on something else.
11. This change matches the priorities of our organization.
12. The top members of the organization have put all their support behind this change effort.
13. My supervisor has stressed the importance of this change. <sup>D</sup>
14. I anticipate difficulty adjusting to the work that I will have after this change has been implemented. <sup>D</sup>
15. There are some tasks that will be required for this change that I do not think I can do well. <sup>D</sup>
16. Organizational leadership has encouraged us all to embrace this change.
17. I have the skills that are needed to make this change work.
18. When I set my mind to it, I can learn everything that will be required when this change is done.

19. My past experiences make me confident that I will be able to perform successfully after this change is made.
20. I am worried I will lose some of my status in the organization when this change is implemented.
21. This change will disrupt many of the personal relationships I have developed.
22. My future in this job will be limited because of this change.
23. Organizational leadership has sent a clear signal this department is going to change.

Oreg, 2006 (Resistance to Change)

1-7 Likert Strongly Disagree to Strongly Agree

Please rate your level of agreement or disagreement with whether or not these statements describe your organization:

1. I was afraid of the change
2. I had a bad feeling about the change
3. I was quite excited about the change (r)<sup>D</sup>
4. The change made me upset
5. I was stressed by the change
6. I looked for ways to prevent the change from taking place
7. I protested against the change
8. I complained about the change to my colleagues
9. I presented my objections regarding the change to management<sup>D</sup>
10. I spoke rather highly of the change to others (r)<sup>D</sup>
11. I believed that the change would harm the way things are done in the organization
12. I thought that it's a negative thing that we were going through this change
13. I believed that the change would make my job harder<sup>D</sup>
14. I believed that the change would benefit the organization (r)<sup>D</sup>
15. I believed that I could personally benefit from the change (r)<sup>D</sup>

Wanous et al., 2000 (Organizational Change Cynicism)

1-7 Likert Strongly Disagree to Strongly Agree

Please rate your level of agreement or disagreement with whether or not these statements describe your organization:

1. Most of the programs that are supposed to solve problems around here will not do much good.
2. Attempts to make things better around here will not produce good results.
3. Suggestions on how to solve problems will not produce much real change.
4. Plans for future improvement will not amount to much.
5. The people responsible for solving problems around here do not try hard enough to solve them.
6. The people responsible for making things better around here do not care enough about their jobs.<sup>D</sup>

7. The people responsible for making improvements do not know enough about what they are doing.
8. The people responsible for making changes around here do not have the skills needed to do their jobs.<sup>D</sup>

### Outcome Measures

#### Perceptions of Change Success (Caldwell et al., 2004)

1-7 Likert Strongly Disagree to Strongly Agree

Please rate your level of agreement or disagreement with whether or not these statements describe your organization:

1. This change has made my unit less effective.
2. The change created problems for my work unit.
3. This change has disrupted the way my unit normally functions.
4. This change has harmed my work unit.

#### Organizational Commitment (Meyer et al., 1993)

1-7 Likert Strongly Disagree to Strongly Agree

1. I would be very happy to spend the rest of my career with this organization.<sup>D</sup>
2. I really feel as if this organization's problems are my own.
3. I do not feel a strong sense of "belonging" to my organization. (r)
4. I do not feel "emotionally attached" to this organization. (r)
5. I do not feel like "part of the family" at my organization. (r)
6. This organization has a great deal of personal meaning for me.
7. I do not feel any obligation to remain with my current employer. (r)
8. Even if it were to my advantage, I do not feel it would be right to leave my organization now.
9. I would feel guilty if I left my organization now.
10. This organization deserves my loyalty.
11. I would not leave my organization right now because I have a sense of obligation to the people in it.
12. I owe a great deal to my organization.

#### Participation in Change (Wanberg & Banas, 2000)

1-7 Likert Strongly Disagree to Strongly Agree

Please rate your level of agreement or disagreement with whether or not these statements describe your organization:

1. I have been able to participate in the implementation of the changes that have been proposed and that are occurring.
2. I have some control over the changes that have been proposed and that are occurring.

3. If I wanted to, I could have input into the decisions being made about the changes that are occurring.<sup>D</sup>

Behavioral Support for Change (Herscovitch & Meyer, 2002)

1-7 Likert Strongly Disagree to Strongly Agree

Cooperation

1. I work toward the change consistently
2. I remain optimistic about the change, even in the face of adversity
3. I avoid former practices, even if they seem easier<sup>D</sup>
4. I engage in change-related behaviors that seem difficult in the short-term but are likely to have long-term benefits
5. I seek help concerning the change when needed<sup>D</sup>
6. I don't complain about the change<sup>D</sup>
7. I try to keep myself informed about the change
8. I am tolerant of temporary disruptions and/or ambiguities in my job

Championing

9. I encourage the participation of others in the change
10. I speak positively about the change to co-workers<sup>D</sup>
11. I speak positively about the change to outsiders
12. I try to find ways to overcome change-related difficulties<sup>D</sup>
13. I persevere with the change to reach goals
14. I try to overcome co-workers' resistance toward the change

Turnover Intentions (Cammann et al., 1983)

1-7 Likert Strongly Disagree to Strongly Agree

1. It is likely that I will actively look for a new job in the next year.
2. I often think about quitting.
3. I will probably look for a new job within the year.

Dimensions of Learning Organization Questionnaire (Marsick & Watkins, 2003)

1-7 Likert Strongly Disagree to Strongly Agree

1. People help each other learn.
2. People are given time to support learning.
3. People are rewarded for learning.
4. People give open and honest feedback to each other.
5. Whenever people state their view, they also ask what others think.
6. People spend time building trust with each other.
7. Teams/Groups have the freedom to adapt their goals as needed.
8. Teams/Groups revise their thinking as a result of group discussions or information collected.
9. Teams/Groups are confident that the organization will act on their recommendations.
10. Leaders mentor and coach those they lead.
11. Leaders continually look for opportunities to learn.

12. Leaders ensure that the organization's actions are consistent with its values.
13. Creates systems to measure gaps between current and expected performance.
14. Makes its lessons learned available to all employees.
15. Measures the results of the time and resources spent on training.
16. Recognizes people for taking initiatives.
17. Gives people control over the resources they need to accomplish their work.
18. Supports employees who take calculated risks.
19. Encourages people to think from a global perspective.
20. Works together with the outside community to meet mutual needs.
21. Encourages people to get answers from across the organization when solving problems.

## Appendix C

### Finalized Change-Oriented Organizational Culture Scale

1-7 Likert Strongly Disagree to Strongly Agree

#### Justice

1. Procedures to give rewards to employees are applied consistently.
2. Procedures to give rewards to employees are based on accurate information.
3. The procedures to give rewards to employees uphold ethical and moral standards.
4. Procedures to give rewards to employees are free of bias.
5. The rewards I am given are appropriate for the work I complete.

#### Flexibility and Innovation

6. The organization emphasizes acquiring new resources and creating new challenges.
7. Trying new things and prospecting for opportunities are valued.
8. The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator.
9. This organization values experimentation
10. We constantly are revising and improving the way we work.
11. The leadership is generally considered to display an entrepreneurial spirit.
12. The glue that holds the organization together is commitment to innovation and development.
13. This organization emphasizes being on the cutting edge.
14. We value creativity.
15. Leaders are always seeking new opportunities for the organization.

#### Communication and Leadership

16. All employees are kept up to date on customer preferences and changes.
17. Employees' questions are adequately answered.
18. Sufficient advanced notice is given to employees about any organizational changes.
19. Employees have ample opportunities for input.
20. The organization keeps everyone fully informed.
21. If changes are necessary, employees are provided an adequate explanation.
22. Leaders at this organization are candid in their communications with me.
23. Leaders at this organization offer reasonable explanations regarding organizational matters.
24. Leaders at this organization tailor communications to individuals' specific needs.

#### Structure and Rules

25. Focus on what skills employees will need in the future.
26. Assist in each-others' learning.
27. Allow employees to take time away from their jobs to pursue learning goals.

28. Consider obstacles and setbacks to be learning opportunities.
29. Give employees rewards (e.g., money, recognition, etc.) for learning new skills.
30. Keep track of areas of strength and weaknesses for future employee development.
31. Use a system to identify where employees currently are vs. where they need to be.
32. Track the effects of training and development.