# Leadership and Organizational Culture: Linking CEO Characteristics to Cultural Values

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**Abstract**

*Purpose* The purpose of this study was to empirically examine organizational culture theorists' assertions about the linkages between leadership and the cultures that emerge in the organizations they lead. Specific hypotheses were developed and tested regarding relationships between chief executive officers' (CEO's) personality traits, and the cultural values that are shared among their organization's members.

*Design/Methodology/Approach* Thirty-two CEOs completed measures of the Big-Five personality traits and personal values. A total of 467 employees across the 32 organizations completed a competing values measure of organizational culture.

*Findings* Results indicate support for several hypothesized relationships between CEO personality and cultural values. Exploratory analyses indicated that several CEO personal values were related to culture values.

*Implications* Organizations need to seriously consider the "fit" between the current or desired organizational culture and CEO characteristics. Organizations attempting to change fundamental aspects of its functioning may need significant behavioral—or personnel—changes at the top of the organization in order to achieve those changes.

*Originality/Value* This is the first empirical study to establish a link between specific CEO characteristics and the cultural values of their organizations. This study provides evidence that CEO characteristics are felt throughout the organization by impacting the norms that sanction or discourage member behavior and decision making, and the patterns of behavior and interaction among members.

**Keywords** CEO characteristics · Organizational culture · Leadership · ASA theory · Multi-level research

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## Introduction

Organizational culture is a topic of considerable interest to organizational researchers, management consultants, and corporate executives alike. For example, organizational culture has been described as a management tool (Trice and Beyer 1993), credited with creating a competitive advantage (Bennis and Nanus 1985), as the reason behind merger and acquisition failure (Donahue 2001), and for providing the basis for success (Denison 1990). An organization's culture is also thought to be intricately related to its leadership, particularly its upper echelon leaders (e.g., Bennis 1986; Davis 1984; Quinn and McGrath 1984; Schein 2004; Trice and Beyer 1993). Yet, as Schneider and Smith (2004) noted, there is plenty of theory suggesting that leaders have an effect in their organizations, but little empirical study of the linkages between leaders' individual differences and organizational characteristics and success.

The dearth of empirical research linking leader characteristics and organizational phenomena, particularly organizational culture, may be due in part to the difficulties in obtaining measures of psychological characteristics such as personality traits from upper echelon leaders. At the same time, explanation may also lie in the focus of the phenomena studied by different disciplines. In 1968, L.K. Williams observed that micro-level characteristics such as personality and macro-level characteristics such as culture are the divergent interests of different disciplines (psychology and cultural anthropology, respectively). Yet Williams went on to note that "the simultaneous consideration of personality and the structure and functioning of the [organizational] system" are critical to understanding organizational behavior (p. 155). The present study addresses the paucity of research by examining relationships between CEOs' personality traits and the cultural values of the organizations they lead. Understanding these relationships will advance theory and practice regarding organizational culture, particularly as it relates to organizational change and development.

## Organizational Culture and the Competing Values Model

While the concept of culture as a construct for understanding organizational life is in the early stages of evolution (Reichers and Schneider 1990; Rousseau 1990), societal culture has been studied for decades. Societal culture explains what things are, how they got that way, and how they ought to be (Kluckhohn 1942). The answers to these questions amount to the assumptions and ideologies that define the content of a particular society's culture (Trice and Beyer 1993). The content, consciously or unconsciously, defines what is and is not acceptable behavior, and provides guidance and behavioral norms for members to ensure that the needs of individuals and the needs of society can coexist (Apter 1964).

In organizations, culture serves a similar function by addressing shared meaning and interpretation of organizational events (Louis 1980; Rentsch 1990; Schein 2004). Organizational culture is a collective phenomenon emerging from members' beliefs and social interactions (Schneider 1987; Trice and Beyer 1993), containing shared values, mutual understandings, patterns of beliefs, and behavioral expectations (Rousseau 1990) that tie individuals in an organization together over time (Schein 2004). The beliefs that are passed down through the organization and taught to new members are those that have proven effective over time (Schein), and thus become part of the shared history of the organization. As such, culture is an integrating mechanism that guides organizational behavior.

There appears to be a general consensus among organizational researchers that culture manifests in different layers within an organization along a continuum of accessibility, ranging from easily observable artifacts to shared values to deeply held ideologies and assumptions that are difficult to access (e.g., Rousseau 1990; Schein 2004; Trice and Beyer 1993). While Schein (2004) contended that fundamental assumptions are the essence of an organization's culture, Rousseau (1990) noted that values are perhaps the deepest layer of culture that can be examined and compared empirically. Shared values have been a primary focus of organizational culture research (see O'Reilly and Chatman 1996), as they are believed to facilitate efficient interactions between members, enabling integration and survival (Meglino and Ravlin 1998). In the current study, we examine organizational culture through the values shared among members.

A number of models of cultural values have been presented in the organizational literature, each offering a different set of values believed to represent organizational culture (e.g., OCI, Cooke and Lafferty 1987; OCP, O'Reilly et al. 1991). Moreover, organizational culture theorists argue that organizations embody a relatively narrow set of values (Kluckhohn 1951; Schein 2004), and suggest that specific values are most helpful in understanding organizational processes (Meglino and Ravlin 1998). The competing values model (CVM) of organizational culture originally presented by Quinn and Kimberly (1984) and further developed by Cameron et al. (2007) provides a taxonomy of cultural values that reflect preferred structural characteristics and desired modes of operation. The CVM of culture posits that organizations experience competing tensions along two dimensions: the demands for flexibility versus stability and control, and a focus on internal maintenance versus external competitive positioning (Cameron et al. 2007). These two dimensions combine to create four sets of values associated with one of four types of organizational culture, specifically Clan, Adhocracy, Hierarchy, and Market cultures.

Clan cultures, also referred to as group cultures, combine a focus on flexibility and internal maintenance. Adhocracy cultures, also referred to as developmental cultures, combine a focus on flexibility with an emphasis on competitive positioning. Market cultures, also referred to as rational cultures, combine an emphasis on stability and control with competitive market positioning. Finally, hierarchical cultures emphasize stability and internal maintenance (Cameron et al. 2007; Denison and Spreitzer 1991; Quinn and Kimberly 1984; Zammuto and O'Connor 1992). Cameron and colleagues went on to note that decisions of upper echelon leaders regarding internal integration mechanisms and strategic organizational direction shape the content of an organization's culture toward one of the sets of values.

The CVM has been rated as one of the 40 most important management theoretical models (Ten Have et al. 2003) and is used extensively in both practical (see Cameron et al. 2007), and scientific studies of organizational culture and fit (e.g., Van Vianen 2000). Because the CVM has been used extensively in organizational research and allows for a succinct evaluation of culture within and between organizations, we rely on the CVM to study organizational culture in the current study.

## Organizational Culture and Upper Echelon Leadership

Organizational culture and leadership are thought to be highly related aspects of organizational life, because they serve similar functions (Schein 2004), operate in similar ways (Hanges et al. 2000), and have reciprocal influences on each other (Schein 2004; Schneider 1987; Trice and Beyer 1993). Furthermore, upper echelon leaders are believed to be the primary influence on the creation and development of organizational culture (e.g., Bennis and Nanus 1985; Davis 1984; Kotter and Heskitt 1992; Schein 2004; Schneider 1987; Selznick 1957; Trice and Beyer 1993). For example, Miller and colleagues (1986, 1982) found relationships between specific leader personality characteristics (e.g., nAch, Locus of Control) and indicators of their firm's structural characteristics (e.g., centralization, formalization, etc.). Likewise, Tsui et al. (2006) found that CEO's performance building behaviors (e.g., vision, visibility) and institution building behaviors (e.g., what they pay attention to, delegation) lead to the creation of organizational processes and structural characteristics that strengthen organizational cultures.

Schein's (2004) theory of culture and leadership, and Schneider's (1987) Attraction-Selection-Attrition (ASA) theory provide similar perspectives on the role of leaders in establishing, maintaining, and changing the content of an organization's culture. Both suggest that content formation begins with the decisions made by organizational leaders. A key point made by Schein (2004) is that "Organizations do not form spontaneously. Instead they are goal oriented and have a specific purpose" (p. 212). In turn, Schneider, Goldstein, and Smith (1995) suggested that the organization's goals are an operationalization of the top leader's personality broadly defined. Thus upper echelon leaders, and in particular founders, embed their personal characteristics into their organizations by establishing the organization's goals, which then attract people who have similar personal characteristics as top leaders (Schneider 1987). Schein (2004) theorized that CEOs further consciously and unconsciously embed their tendencies and preferences into their organizations through a variety of mechanisms, such as what leaders pay attention to, criteria used to allocate rewards, and criteria used for personnel

decisions. Culture forms as this initial cadre interacts with each other and the CEO trying to determine how best to achieve the organization's goals and make sense of how the organization will operate. CEOs further reinforce cultural content through six secondary articulation or reinforcement mechanisms, including organizational design decisions, stories and myths, and formal statements.

Thus, the content of an organization's culture does not form randomly; rather it forms through the CEO's key strategic and operational decisions which in turn are a reflection of the CEO's characteristics. These decisions form the basis for the shared values and assumptions that become the organization's culture. Therefore, a relationship should exist between CEO personal characteristics and the cultures that emerge in their respective organizations. The personality traits of leaders are likely to be a particularly useful set of personal characteristics for understanding the linkages between the CEO and the culture of their firms. Personality refers to the set of characteristics that define a person and exemplify how he or she interacts with others (Allport 1961). Traits are one approach to understanding personality that refer to long-term, stable dispositions associated with a tendency to behave in a certain manner (McCrae and Costa 1996), and guide a person's behavior in a given situation (Cattell 1943).

The five-factor model (FFM), or Big Five model has become a generally accepted taxonomy of personality traits (Mount and Barrick 1995). Goldberg (1990) suggests that nearly all personality characteristics can be categorized into one of the five broad traits. The Big Five traits include agreeableness, conscientiousness, extraversion, emotional stability or neuroticism, and openness to experience (Costa and McCrae 1992; Goldberg 1990). Moreover, the Big Five model has been shown to be robust across situations and cultures (Barrick and Mount 1991) and stable over time (Judge et al. 1999). Finally, Judge and Cable (1997) found that several Big Five personality traits were related to applicant's preferences for organizational cultures. The linkages established by Judge & Cable between applicant personality and culture preferences also provide some indication of the CEO personality traits that may be related to culture values. Next, we propose linkages between leader personality traits and each of the four culture values in the CVM.

## Clan Culture Values and CEO Personality

Clan cultural values have an orientation toward collaboration and combine an emphasis on flexibility and internal maintenance (Cameron et al. 2007; Zammuto and O'Connor 1992). Organizational practices in Clan cultures focus on strengthening the sociotechnical systems, developing human capital, and building cohesion and commitment.

A key underlying assumption of this culture type is that employee development, engagement, and commitment lead to organizational success (Cameron et al. 2007). The firm encourages leadership styles that are supportive and people-oriented (Zammuto and O'Connor 1992), such as mentors and team builders (Cameron et al. 2007).

We suggest that CEO agreeableness, emotional stability, and extraversion are likely to be linked to Clan culture values. Individuals with higher levels of agreeableness tend to be cooperative and concerned about relationships with others (Hogan and Hogan 1995). In addition, higher levels of agreeableness among team members have been linked to greater group cohesion (Barrick et al. 1998). Regarding organizational characteristics, Judge and Cable (1997) found that individuals with agreeable personality traits also held preferences for team-oriented and supportive organizational cultures. In addition, agreeable personality traits of CEOs have been related to top management team (TMT) dynamics that are characterized as cohesive and decentralized (Peterson et al. 2003). Leaders who have high levels of agreeableness seem likely to foster an environment of cooperation and be concerned about the development of employees, thereby fostering a Clan culture.

**Hypothesis 1**a   CEO agreeableness personality traits are positively related to the extent to which their organization is characterized by Clan culture values.

We also suggest that leaders who are more emotionally stable are likely to lead organizations with Clan cultures. Individuals who are more emotionally stable tend to be less prone to anxiety and experience fewer mood swings. In terms of leadership, low emotionally stable leaders may be too caught up in their own anxiety to be concerned about cohesion and morale among staff. In contrast, more emotionally stable leaders will likely seek to create an organization with good employee morale and management-employee relations. For example, Peterson and colleagues (2003) found that more emotionally stable CEOs tended to also have top management teams (TMTs) that were characterized by more cohesive team dynamics.

**Hypothesis 1**b   CEO emotional stability personality traits are positively related to the extent to which their organization is characterized by Clan culture values.

Extraversion is a broad personality trait characterized by two primary dimensions, sociability and assertiveness (Watson and Clark 1997). Individuals having higher levels of extraversion tend to be outgoing, enjoy affiliating with others, and tend also to be energetic (Costa and McCrae 1992). Moreover, some evidence suggest that extraverted individuals have preferences for team-based organizational cultures (Judge and Cable 1997). CEOs with higher levels of extraversion are likely to encourage affiliation, interaction

and group efforts, and create structures that elicit cooperation and teamwork among members.

**Hypothesis 1**c   CEO extraversion personality traits are positively related to the extent to which their organization is characterized by Clan culture values.

Adhocracy Culture Values and CEO Personality

Adhocracy culture values combine an emphasis on flexibility with a focus on strengthening the firm's competitive positioning, and have an orientation toward creativity and innovation (Cameron et al. 2007; Zammuto and O'Connor 1992). Organizational practices in adhocracy cultures focus on growth, adaptability, and transformational change. Employees are encouraged to push boundaries and break rules to build future success. The key underlying assumption in these organizations is that innovation and constant change will enable the organization to create its own future and be a market leader (Cameron et al. 2007). Inventive, visionary, and adaptable leadership strategies are encouraged in organizations with adhocracy cultures (Cameron et al. 2007; Zammuto and O'Connor 1992).

We suggest that three CEO personality traits are likely to be related to the content of Adhocracy cultures, including openness to experience, agreeableness, and emotional stability. Individuals having higher levels of openness to experience tend to be characterized as unconventional, original, and independent thinkers (Costa and McCrae 1992), which likely lead to preferences for organizations with cultures that encourage innovation and creativity. For example, Judge and Cable (1997) found that openness to experience personality traits were related to preferences for innovative cultures. Similarly, Peterson and colleagues (2003) found that CEO openness to experience was related to TMT dynamics that encouraged risk taking.

**Hypothesis 2**a   CEO openness to experience personality traits are positively related to the extent to which their organization is characterized by Adhocracy culture values.

CEOs with lower levels of agreeableness may foster an organization characterized by an Adhocracy culture. Individuals who score lower on agreeableness tend not to shy away from conflict or competition (Costa and McCrae 1992). Some evidence indicates that less agreeable individuals have preferences for aggressive and outcome-oriented cultures (Judge and Cable 1997). Leaders low on agreeableness are likely to emphasize the importance of the organization's ability to compete with other firms, and encourage people to take chances that may help the organization prosper.

**Hypothesis 2**b   CEO agreeableness personality traits are negatively related to the extent to which their organization is characterized by Adhocracy culture values.

Finally, we suggest that CEO emotional stability is likely to be negatively related to adhocracy cultures. People with lower levels of emotional stability tend to be excitable and experience a greater range of emotions than those who have higher levels of emotional stability (Hogan and Hogan 1995). Leaders with lower emotional stability may crave the excitement of the drive to be a market leader, and create less stable internal processes that encourage change, innovation, and growth.

**Hypothesis 2c** CEO emotional stability personality traits are negatively related to the extent to which their organization is characterized by Adhocracy culture values.

Market Culture Values and CEO Personality

Market culture values have an orientation toward competitive position and combine an emphasis on stability with external market positioning (Cameron et al. 2007; Zammuto and O'Connor 1992). Organizational practices in Market cultures emphasize a focus on satisfying customer and key shareholder demands, competing aggressively to expand market share, and rapidly responding to the demands of the market place (Cameron et al. 2007). The organization is structured to deliver maximum returns and profitability (Zammuto and O'Connor 1992). A key underlying assumption in Market cultures is that aggressive competition and customer-focused practices increase market share and organizational effectiveness (Cameron et al. 2007). Leadership styles that are goal oriented, directive, and hard-driving are encouraged in Market cultures (Cameron et al. 2007; Zammuto and O'Connor 1992).

Three CEO personality traits are also likely to be reflected in Market culture values including, extraversion, agreeableness, and emotional stability. Individuals with high extraversion scores tend to be outgoing and dominant (Hogan and Hogan 1995), and have a strong social presence (Gough 1987). Moreover, extraverted individuals have been found to have preferences for aggressive cultures and outcome-oriented cultures (Judge and Cable 1997). Extraverted CEOs seem likely to encourage aggressive competition and to reward employees for producing results, thereby fostering a Market culture.

**Hypothesis 3a** CEO extraversion is positively related to the extent to which their organization is characterized by Market culture values.

In contrast, CEOs with lower levels of agreeableness may also foster Market cultures. Individuals lower on agreeableness do not shy away from competition, and they tend to be aggressive and less concerned about getting along with others for the sake of getting along (Costa and McCrae 1992). Leaders having lower levels of agreeableness likely desire organizational cultures which focus not on relationships between individuals, but rather on rewarding competence, goal achievement, and efficiency-in short, reward fulfilling a performance-based contract between the company and employee, rather than rewarding affiliation and cohesion, which is consistent with Market culture values (Zammuto and O'Connor 1992). Moreover, Judge and Cable (1997) found that individuals with less agreeable personality traits tended to prefer more aggressive and outcome-oriented cultures. It stands to reason that less agreeable CEOs would foster an environment that promotes aggressive competition and focuses on results.

**Hypothesis 3b** CEO agreeableness personality traits are negatively related to the extent to which their organization is characterized by Market culture values.

Finally, CEO emotional stability appears likely to be negatively related to Market cultures. As noted previously, people with lower levels of emotional stability tend to experience a wide range of emotions (Hogan and Hogan 1995) and may desire to work in a dynamic environment because they provide excitement and stimulation. Additionally, less emotionally stable individuals are likely to be concerned or even aware of how their actions affect others. In turn, less emotionally stable CEOs may enjoy the excitement of aggressive competition and form an intense performance focus without considering issues such as employee development, cohesion, and/or morale. As a result, there is likely to be a link between lower levels of CEO emotional stability and Market cultures.

**Hypothesis 3c** CEO emotional stability personality traits are negatively related to the extent to which their organization is characterized by Market culture values.

Hierarchical Culture Values and CEO Personality

Hierarchical culture values have an orientation toward control and combine an emphasis on stability with internal maintenance (Cameron et al. 2007; Zammuto and O'Connor 1992). Organizational strategies are inwardly focused and based on the key assumption that control and efficiency lead to success (Cameron et al. 2007). Organizational practices emphasize standardization, minimizing errors and uncertainty, and increasing consistency. Cautious, conservative, and logical leadership and decision-making styles emphasizing organizational predictability are encouraged (Cameron et al. 2007; Zammuto and O'Connor 1992).

We suggest that four CEO personality traits are likely to be reflected in Hierarchical organizational culture values, including agreeableness, emotional stability, extraversion,

and openness to experience. Consistent with hierarchical culture values and their respective bureaucratic structures and processes (Zammuto and O'Connor 1992), less agreeable individuals have a tendency to be suspicious of others and their motives (Graziano et al. 2007). In contrast, agreeable individuals are more likely to make decisions taking into account the needs and unique circumstances of others, and will respond to the needs of others, rather than comply with rules and regulations (Tobin et al. 2000). As a result, we suggest that CEOs who score low on agreeableness will be more likely to emphasize and are therefore likely to rely on rules, regulations, and oversight through multiple management levels to ensure compliance with organizational needs.

**Hypothesis 4**a   CEO agreeableness personality traits are negatively related to the extent to which their organization is characterized by hierarchical culture values.

Individuals who have higher levels of emotional stability tend to be efficient in decision making, and less impulsive and excitable (Costa and McCrae 1992). Emotionally stable CEOs will likely desire to create a stable and controlled work environment, and have less interest in the excitement of aggressive competition. Along these lines, CEO emotional stability has also been linked to greater legalism (or formal rules focus) among TMTs. Therefore, we suggest that CEO emotional stability is likely to be associated with an organization's culture being characterized by greater hierarchical values.

**Hypothesis 4**b   CEO emotional stability personality traits are positively related to the extent to which their organization is characterized by hierarchical culture values.

In contrast, lower levels of CEO extraversion seem likely to be related to hierarchical organizational cultures. In contrast to individuals higher on extraversion, individuals lower on extraversion tend to be less sociable and assertive, and are less likely to seek excitement and arousal (Costa and McCrae 1992; Eysenck 1990). Regarding organizational culture preferences, less extraverted individuals have been found to prefer organizational cultures that are less aggressive (Judge and Cable 1997). CEOs who are less extraverted seem likely to put into places polices and structures that reduce uncertainties and create a stable and efficient environment.

**Hypothesis 4**c   CEO extraversion personality traits are negatively related to the extent to which their organization is characterized by hierarchical culture values.

Finally, individuals who are lower on openness to experience tend to be seen as less spontaneous, less adventurous, and more cautious and conservative (Costa and McCrae 1992). Peterson and colleagues (2003) found that CEOs characterized by lower levels of openness tended to have TMTs characterized by having more rigid and risk adverse dynamics. These characteristics and dynamics are consistent with the practices and strategies that characterize Hierarchical cultures. We suggest that CEOs with lower levels of openness to experience seem likely to put in place policies, processes, rules, and structures that minimize risk taking, and emphasize consistency and control of operations.

**Hypothesis 4**d   CEO openness to experience personality traits are negatively related to the extent to which their organization is characterized by hierarchical culture values.

Organizational Culture Values and CEO Values

Aside from personality traits, personal values are another set of CEO personal characteristics that are likely to be embedded in the culture of the organizations they lead. Rokeach (1973) defines values as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end state of existence" (p. 5). Values represent desires or preferences (Kluckhohn 1951) that determine what is and what is not personally rewarding (Locke 1991) and lead to intentions and tendencies to engage in actions to obtain that which is desired (McClelland 1985; Rokeach 1973). Moreover, values are thought to direct more deeply held individual differences such as personality traits (McClelland 1985), and motivate and direct a person's behavior (Locke 1991).

While a number of taxonomies of personal values (e.g., Schwartz and Bilsky 1987; Smith et al. 2002) and work-related values (e.g., Cable and Edwards 2004; Hogan and Hogan 1996; Ravlin and Meglino 1987) exist, researchers have not gained consensus on a generally accepted model of values. The model presented by Smith and colleagues (2002), provides a comprehensive taxonomy containing 10 values, including aesthetic, affiliation, benevolence, economic, hedonistic, power, status, theoretical, security, and tradition, and has been used in recent organizational research (e.g., Giberson et al. 2005; Klein et al. 2004). Because of the limited research on leaders' personal values, we do not propose specific hypothesized relationship. Rather, we use Smith and colleagues (2002) taxonomy and conduct exploratory analyses of the relationship between CEOs' personal values organizational culture values. Table 1 contains definitions, sample items, and internal consistency reliabilities for each of the 10 values included in their taxonomy.

**Table 1** Value scale definitions and sample items

| Value | Items | α | Definition and sample items[a] |
|---|---|---|---|
| Aesthetic | 6+ | .69 | Associated with an interest in art, literature, music, and other creative outlets |
| | | | • Appreciating art, music, and literature |
| Affiliation | 5+ | .63 | Associated with a need for frequent social contact, and a lifestyle organized around close friendships and interaction with others |
| | | | • Being with others rather than being alone |
| Benevolence | 6+ | .82 | Associated with a desire to help others, improve society, and a lifestyle organized around donating time and money to make the world a better place |
| | | | • Providing aid to the needy or less fortunate |
| Economic | 6+ | .85 | Associated with an interest in earning money, realizing profits, and a lifestyle organized around gaining wealth and financial planning |
| | | | • Being financially successful |
| Hedonistic | 5+ | .73 | Associated with a desire for pleasure, excitement, variety, and a lifestyle organized around having fun and entertainment |
| | | | • Enjoying life to its fullest |
| Power | 7+ | .76 | Associated with a desire for control and to influence and being in charge of others |
| | | | • Increasing your social status |
| Security | 6+, 2− | .81 | Associated with a need for structure, order, predictability, and a lifestyle organized around planning for the future and minimizing risk, uncertainty, and criticism |
| | | | • Receiving recognition for accomplishments |
| Status | 5+ | .72 | Associated with the need to be recognized and respected by others, and a lifestyle organized around attaining symbols and positions of status |
| | | | • Being recognized as important |
| Theoretical | 8+ | .57 | Associated with an interest in new ideas, new technology, an analytical approach to problem solving, and a lifestyle organized around learning, exploring, and understanding how things work |
| | | | Satisfying curiosity about how things work |
| Tradition | 8+ | .79 | Associated with concern for morality, high standards, appropriate social behavior and a lifestyle guided by specific, established principles |
| | | | • Being respectful of authority figures |

*Note*: Only items with $\alpha = .70$ or greater were included for subsequent analyses

[a] Each item is rated with a 1–5 importance scale, where 1 = Very unimportant and 5 = Very important

## Method

### Participants

The organizations and CEOs were recruited to participate in this study through three mechanisms: (a) one of two invited 15-min presentations regarding culture and leadership delivered by the first author at monthly meetings of business leaders, (b) contacts with clients from previous consulting engagements, or (c) personal referrals. The 15-min presentations did not focus on the nature of the hypotheses of this study. A total of 53 CEOs expressed interest in participating in the study. A total of 33 of these 53 organizations agreed to participate in the study in a follow up phone call from the first author, of which complete data sets were provided by 32 organizations. Thus, of the 53 organizations approached, 33 agreed to participate (62%), and of those 33 who started, 32 (97%) followed through with the study. Each participating CEO subsequently received a report summarizing the overall results of the study, and his/her organization's specific results (Table 2).

The participating organizations came from a diverse range of industries, sizes, and ages, and thus represented a relatively heterogeneous sample. In terms of size, organizations consisted of small to mid-sized organizations, ranging in size from 8 to 1,000 employees (Mdn = 27), with annual revenues of $400,000 to $310,000,000 (Mdn = $13,250,000). Organizations were located primarily in the Midwestern U.S., represented 10 different industries, and had been in existence from 6 months to 131 years (Mdn = 22 years).

Individual participants included the 32 CEOs and 467 employees (255 male and 212 female) representing several organizational levels. Excluding the CEO, the number of participants from each organization ranged from 7 to 30 (M = 14.5). The number of participants for each organization was generally reflective of the relative size of the

**Table 2** Means, standard deviations, and correlations among all leader personality and values and organizational culture values

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Personality* | | | | | | | | | | | | | | | | | | |
| 1. Extraversion | 3.65 | .59 | 24 | 00 | 12 | 32 | 19 | 10 | 01 | 11 | −46 | −02 | −12 | −02 | 22 | −09 | −12 | |
| 2. Agreeableness | 4.17 | .58 | | 15 | 43* | 35* | 61** | −10 | 15 | −27 | 07 | −15 | −02 | 47** | −23 | −29 | −17 | |
| 3. Conscientiousness | 3.82 | .71 | | | 16 | −02 | 23 | −03 | −26 | 07 | 15 | 03 | 30 | −04 | −01 | −14 | 13 | |
| 4. Emotional stability | 3.58 | .64 | | | | | 12** | 08 | −12 | −33 | −14 | −12 | −38* | −03 | 31 | −15 | −27 | −06 |
| 5. Openness | 3.78 | .54 | | | | | | 42* | 13 | −23 | 10 | −21 | 19 | −09 | 09 | −02 | −10 | −03 |
| *Values* | | | | | | | | | | | | | | | | | | |
| 6. Benevolence | 4.14 | .35 | | | | | | | −06 | −26 | 00 | −03 | 02 | −02 | 40 | 42* | −21 | 02 |
| 7. Economic | 3.42 | .55 | | | | | | | | 18 | 56** | 31 | 48** | 19 | −26 | 11 | 13 | 12 |
| 8. Hedonistic | 3.22 | .53 | | | | | | | | | 32 | 18 | 15 | −04 | −21 | 24 | 10 | −02 |
| 9. Power | 3.80 | .44 | | | | | | | | | | 16 | 59** | 27 | −26 | 31 | −06 | 06 |
| 10. Security | 3.58 | .41 | | | | | | | | | | | 41* | 31 | −06 | −02 | −06 | 12 |
| 11. Status | 3.10 | .60 | | | | | | | | | | | | 24 | −33 | 05 | 21 | 20 |
| 12. Tradition | 3.40 | .59 | | | | | | | | | | | | | 03 | 02 | 02 | −06 |
| *Culture values* | | | | | | | | | | | | | | | | | | |
| 13. Clan | 163.98 | 55.12 | | | | | | | | | | | | | | −36* | −31 | −64** |
| 14. Adhocracy | 100.34 | 33.74 | | | | | | | | | | | | | | | −23 | −30 |
| 15. Market | 132.42 | 41.53 | | | | | | | | | | | | | | | | −05 |
| 16. Hierarchical | 102.49 | 35.89 | | | | | | | | | | | | | | | | |

*Note*: Numbers on diagonal equal coefficient alpha; $N = 32$ for all correlations

* $p < .05$, two-tailed;  ** $p < .01$, two-tailed

organizations; thus, the largest organization (headcount of 1,000) returned 30 packets, the organization with 8 employees returned 8 packets. CEOs had been with their organization from less than 1 year to 11 or more years, with the majority of leaders having 11 or more years of service with their organizations. In addition, 18 of the 32 CEOs were the actual organizational founder. CEOs ranged in age categories from 25–30 to 51 years and over, with the majority in the 41–50 and 51 years and over categories. Employee participants ranged in age categories from 18–24 to 51 years and over, with the majority of participants in the 31–40 years age category. Employee participants had been with their organization from less than 1 year to 11 or more years, with the majority of participants in the 5–10 year range. Each of the employee participants was asked by the CEO or a designee of the CEO (e.g., HR professional) to participate in the study by providing an information packet addressed jointly from the first author and the CEO. Organizations were provided the number of participant packets requested, with a required minimum of 7 suggested by the first author. The response rate for each organization ranged from 92 to 100%, with a modal response rate of 100% and an average response rate of 96%. The percentage of participants responding from the total employees within each respective organization ranged from 3 (in our largest organization) to 100% (in our smallest two organization) ($M = 35\%$, Mdn $= 26\%$).

Measures

*Personality*

Personality was measured using Goldberg's (2000) 50-item Big-Five personality inventory, which contains five 10-item subscales including: extraversion, agreeableness, conscientiousness, emotional stability, and intellect or openness to experience. This freely available inventory provides a short scale that addresses the Big-Five markers (Goldberg 1992, 1997). Acceptable internal consistency reliabilities were reported for each of the scales, with alphas ranging from .79 to .87. Responses were anchored along a 5-point response scale of $1 = strongly\ disagree$ to $5 = strongly\ agree$.

*Personal Values*

A recently developed values measure (Smith et al. 2002) was used in the current study. This instrument is a 64 item measure of 10 personal values, which include: aesthetic, affiliation, benevolence, economic, hedonistic, power, security, status, theoretical, and tradition. Responses were anchored along a 5-point response scale, $1 = very\ unimportant$ to $5 = very\ important$. Internal consistency reliabilities ranged from $\alpha = .57$ to $\alpha = .85$, and only the seven values whose internal consistencies met or exceeded

$\alpha = .70$ were included for subsequent analyses. Descriptive statistics, definitions, and sample items are presented in Table 1.

### Culture Values

The Competing Values Instrument (CVI; Zammuto and Krakower 1991) was used to measure organizational culture. Quinn and Kimberly (1984) asserted that organizations are unlikely to have a value system completely characterized by one of the four cultural values (described earlier), and are more likely to hold a combination of values, with certain values emphasized more strongly than others. The CVI was designed to assess the extent to which an organization's culture is characterized by each of four culture values, including Clan, Adhocracy, Hierarchical, and Market. The instrument presents descriptions of four organizations across five categories, specifically, the organization's character, leadership, bases of commitment, focus, and rewards. Within each of the categories, respondents are asked to determine the relative degree to which each of the four descriptions describe their own organization by distributing 100 points across the four descriptions of organizations within the five categories. While we are aware that some researchers have suggested caution in the use of ipsative scales, the CVI instrument captures the extent to which the organizational environment is characterized by each of the four culture values, and is more consistent with the competing values model than a Likert-scale based measure. Moreover, Saville and Willson (1991) compared computer generated personality scales using both ipsative scales and normative scales, and they found that ipsative and normative data produced similar results when correlated with "true" scores, as well as external rating criteria. These results were replicated using field data. As a result, we used the CVI as an appropriate measure of organizational culture.

### Procedure

CEOs completed a form indicating their willingness to participate in the study, as well as an organizational background questionnaire providing information regarding the organization's size, revenues, industry classification, and the founding of the organization. Leaders were instructed to request the voluntary, anonymous participation of employees whom the leader had influenced their selection into the organization. A participant package was then prepared for each organization containing an instruction sheet for the leader, a leader package, the number of employee participant packages requested by the CEO and a tracking sheet. Each participant and leader package included a participant demographic questionnaire, the personality measure, the values measure, and the culture survey. In all packets (leader and employee participant) participants first provided demographic information (to ensure completion), with the values, personality, and culture measures included in random order to control for order effects. Those participants who agreed to participate completed their surveys, sealed them in a provided envelope, and returned them to the leader or the leaders' designate to return to the first author.

All organizational analyses were then conducted at the organization level. Employee responses to the CVI scales were aggregated by calculating the mean response across all members of the organization (excluding the CEO), followed by intra-class correlation analysis to justify aggregation. Finally, we used hierarchical linear modeling (HLM; Bryk and Raudenbush 1992) to test our hypotheses and exploratory relationships. Specifically, we utilized an intercepts-as-outcomes model in which organizational culture scores provided by employees were effectively regressed onto organizational leader personality scores.

## Results

Organizational culture represents a higher-order construct or shared property of the organization (Klein and Kozlowski 2000), and was operationalized by taking the mean of members' responses to the CVI scales. To provide evidence that culture values are shared by the organization's members and thus represent an organization-level construct, within-organization agreement must be shown to exist among members. Intra-class correlation coefficients ICC (1) and ICC (2) were calculated for the CVI responses to determine the level of member agreement. ICC (1) provides an estimate of the portion of total variance in a measure accounted for by membership in a group, and ICC (2) indicates the reliability of the group (i.e., organization) means (Bliese 2000). ICC (1) scores ranged from .17 to .29 and ICC (2) scores ranged from .75 to .86. ICC (2) is a measure of *both* inter-rater reliability and inter-rater agreement (Lebreton and Senter 2008). Lebreton & Senter suggest that ICC (2) values of .71–.90 suggest *strong inter-rater agreement*, thereby justifying aggregation. Further, all *F* statistics from the ANOVA equations used to calculate ICC (1) & (2) were significant providing evidence of within-organization agreement and justification for aggregating individual responses to create organizational scores (Klein and Kozlowski 2000).

Hypothesis 1a suggests that CEO agreeableness personality traits are positively related to the extent to which their organization is characterized by Clan culture values. Support was found for Hypothesis 1a, as the slope coefficient for the leaders' agreeableness scores (predictor)

($\beta_1 = .096$, $t(30) = 4.12$, $p < .05$) was significant suggesting that organizational Clan culture scores were related to leaders' agreeableness scores. Hypothesis 1b suggests that CEO emotional stability personality traits are positively related to the extent to which their organization is characterized by Clan culture values. Support was found for Hypothesis 1b, as the slope coefficient for the leaders' emotional stability scores (predictor) ($\beta_1 = .074$, $t(30) = 4.46$, $p < .05$) were significant suggesting that organizational Clan culture scores were related to leaders' emotional stability scores. Finally, Hypothesis 1c suggests that CEO extraversion personality traits are positively related to the extent to which their organization is characterized by Clan culture values. Support was not found for this hypothesis, as leader extraversion scores were not significantly related to organizational Clan culture scores ($\beta_1 = .045$, $t(30) = 1.42$, $p = $ ns).

Hypothesis 2a suggests that CEO openness to experience personality traits are positively related to the extent to which their organization is characterized by Adhocracy culture values. The slope coefficient was not significant ($\beta_1 = .033$, $t(30) = 1.52$, $p = $ ns) suggesting leader openness to experience was not related to the Adhocracy culture scores. While results were in the hypothesized direction ($\beta_1 = -.025$, $t(30) = -1.31$, $p = $ ns), support was not found for Hypothesis 2b which suggested that agreeableness traits are negatively related to the extent that culture would be characterized by Adhocracy values. Finally, support was found for Hypothesis 2c, which suggests that CEO emotional stability personality traits are negatively related to the extent to which their organization is characterized by Adhocracy culture values ($\beta_1 = -.025$, $t(30) = -2.16$, $p < .05$) (Table 3).

Support was not found for Hypothesis 3a, which suggests that CEO extraversion is positively related to the extent to which their organization is characterized by Market culture values ($\beta_1 = -.037$, $t(30) = -1.49$, $p = $ ns). However, support was found for Hypothesis 3b, which suggests CEO agreeableness personality traits are negatively related to the extent to which their organization is characterized by Market culture values ($\beta_1 = .062$, $t(30) = -3.26$, $p < .05$). Support was also found for Hypothesis 3c, which suggests that CEO emotional stability personality traits are negatively related to the extent to which their organization is characterized by Market culture values ($\beta_1 = -.044$, $t(30) = -2.88$, $p < .05$).

Hypothesis 4a suggests that CEO agreeableness personality traits are negatively related to the extent to which their organization is characterized by hierarchical culture values. This hypothesis was not supported ($\beta_1 = -.009$, $t(30) = -.44$, $p = $ ns). Similarly, no support was found for Hypothesis 4b, which suggests that CEO emotional stability personality traits are positively related to the extent

**Table 3** Level 1 analyses of the relationship between leader personality and organizational culture

| Hypothesis | Coefficient | SE | $t$ | Variance[a] | $p$ |
|---|---|---|---|---|---|
| *Clan culture* | | | | | |
| Intercept $\beta_0$ | .326 | .019 | 17.07 | .010 | .00 |
| 1a. Agreeableness $\beta_1$ | .096 | .023 | 4.12 | .025 | .00 |
| 1b. Emotional stability $\beta_1$ | .074 | .029 | 4.46 | .025 | .00 |
| 1c. Extraversion $\beta_1$ | .045 | .031 | 1.42 | .025 | .17 |
| *Non-hypothesized Big 5 traits* | | | | | |
| Conscientiousness $\beta_1$ | −.019 | .034 | −.56 | .025 | .58 |
| Openness $\beta_1$ | .221 | .029 | .76 | .025 | .45 |
| *Adhocracy culture* | | | | | |
| Intercept $\beta_0$ | .200 | .012 | 17.1 | .000 | .00 |
| 2a. Openness $\beta_1$ | .033 | .021 | 1.52 | .011 | .14 |
| 2b. Agreeableness $\beta_1$ | −.058 | .019 | −1.31 | .011 | .20 |
| 2c. Emotional stability $\beta_1$ | −.039 | .018 | −2.16 | .011 | .04 |
| *Non-hypothesized Big 5 traits* | | | | | |
| Extraversion $\beta_1$ | .029 | .020 | 1.45 | .011 | .16 |
| Conscientiousness $\beta_1$ | .008 | .015 | .50 | .011 | .62 |
| *Market culture* | | | | | |
| Intercept $\beta_0$ | .267 | .015 | 18.17 | .006 | .00 |
| 3a. Extraversion $\beta_1$ | −.037 | .025 | −1.49 | .016 | .15 |
| 3b. Agreeableness $\beta_1$ | −.062 | .019 | −3.26 | .016 | .00 |
| 3c. Emotional stability $\beta_1$ | −.044 | .015 | −2.88 | .016 | .00 |
| *Non-hypothesized Big 5 traits* | | | | | |
| Openness $\beta_1$ | .004 | .026 | .16 | .016 | .97 |
| Conscientiousness $\beta_1$ | .000 | .027 | .02 | .016 | .99 |
| *Hierarchical culture* | | | | | |
| Intercept $\beta_0$ | .208 | .013 | 16.53 | .004 | .00 |
| 4a. Agreeableness $\beta_1$ | −.009 | .021 | −.44 | .020 | .66 |
| 4b. Emotional stability $\beta_1$ | .010 | .019 | .51 | .020 | .62 |
| 4c. Extraversion $\beta_1$ | −.038 | .017 | −2.18 | .020 | .04 |
| 4d. Openness $\beta_1$ | −.051 | .016 | −3.24 | .020 | .00 |
| *Non-hypothesized Big 5 traits* | | | | | |
| Conscientiousness $\beta_1$ | .011 | .015 | .73 | .020 | .47 |

*Note*: $df = 31$ for intercept calculations, $df = 30$ for hypothesis testing

[a] Variance in level 1 parameter estimates and chi-square test of significant variance

to which their organization is characterized by hierarchical culture values ($\beta_1 = .01$, $t(30) = .51$, $p = $ ns). Support was found for Hypothesis 4c, which suggests that CEO extraversion personality traits are negatively related to the extent to which their organization is characterized by hierarchical culture values ($\beta_1 = -.04$, $t(30) = -2.18$, $p < .05$). Finally, support was found for Hypothesis 4d., which suggests that CEO openness to experience personality traits are negatively related to the extent to which their organization is characterized by hierarchical culture values ($\beta_1 = -.05$, $t(30) = -3.24$, $p < .05$).

We explored the relationships among several leader values and organizational culture utilizing HLM in the same fashion as the hypothesized personality traits. In general, few statistically significant relationships were identified. CEO status values were negatively and significantly related to the extent to which the culture was characterized as having clan culture values ($\beta_1 = -.069$, $t(30) = -2.88$, $p < .05$). CEO status values were also found to be significantly related to the extent to which the culture was characterized as having market culture values ($\beta_1 = .056$, $t(30) = -2.63$, $p < .05$). No significant relationships were found between leader values and Adhocracy or Hierarchical culture values (Table 4).

## Discussion

The inter-relationship between organizational leadership and culture is a core assumption within the field of organizational behavior (see Bennis and Nanus 1985; Davis 1984; Kotter and Heskitt 1992; Schneider 1987; Selznick 1957; Trice and Beyer 1993). Schein (2004) even contended that creating and managing organizational culture is the most important function of top-level leaders. However, there is a paucity of empirical evidence to support this assumption (Schneider and Smith 2004), and the few studies that have been conducted focused on the linkages between leader characteristics and more superficial layers of organizational culture such as structural characteristics (e.g., Miller and Droge 1986; Miller et al. 1982). The present study provides initial empirical evidence that organizational culture values are, at least to some extent, a reflection of the CEO's personality. Below, we elaborate further on these findings, and discuss the implications for theory, research, and practice.

Consistent with our hypotheses, we found that several of the CEOs' personality traits were significantly related to the extent to which members viewed their organizations as characterized by different culture values. CEO agreeableness and emotional stability, in particular, appear to have important linkages with culture values captured by the CVI model. Agreeableness was positively related to the extent to which members viewed their culture as characterized by Clan values, and negatively related to the extent to which members viewed their culture as reflecting Adhocracy and Market values. Clan values emphasize internal process, while both Adhocracy and Market cultures emphasize external competitiveness. It seems theoretically reasonable that CEO's who score high on agreeableness will foster a culture aimed at building morale and cohesion, while those who score lower on agreeableness would be more likely to foster cultures that focus on competitiveness and performance, and the results of this study support this

**Table 4** Level 1 analyses of the relationship between leader values and organizational culture

| | Coefficient | SE | t | Variance[a] | p |
|---|---|---|---|---|---|
| *Clan culture* | | | | | |
| Intercept $\beta_0$ | .326 | .019 | 17.07 | .010 | .00 |
| Benevolence $\beta_1$ | .079 | .047 | 1.69 | .025 | .10 |
| Economic $\beta_1$ | −.009 | .033 | −.27 | .025 | .79 |
| Power $\beta_1$ | −.016 | .037 | −.44 | .025 | .66 |
| Security $\beta_1$ | −.043 | .037 | −1.17 | .025 | .25 |
| Status $\beta_1$ | −.069 | .024 | −2.88 | .025 | .01 |
| Tradition $\beta_1$ | .035 | .038 | .92 | .025 | .36 |
| Hedonistic $\beta_1$ | .000 | .032 | .00 | .025 | .99 |
| *Adhocracy culture* | | | | | |
| Intercept $\beta_0$ | .200 | .012 | 17.1 | .000 | .00 |
| Benevolence $\beta_1$ | −.030 | .033 | −.92 | .011 | .36 |
| Economic $\beta_1$ | .009 | .021 | .44 | .011 | .66 |
| Power $\beta_1$ | .041 | .025 | 1.63 | .011 | .11 |
| Security $\beta_1$ | −.014 | .030 | −.45 | .011 | .65 |
| Status $\beta_1$ | .010 | .021 | .46 | .011 | .64 |
| Tradition $\beta_1$ | −.012 | .021 | −.54 | .011 | .59 |
| Affiliation $\beta_1$ | .006 | .025 | .26 | .011 | .78 |
| *Market culture* | | | | | |
| Intercept $\beta_0$ | .267 | .015 | 18.17 | .006 | .00 |
| Benevolence $\beta_1$ | −.038 | .038 | −1.00 | .016 | .33 |
| Economic $\beta_1$ | .018 | .027 | .66 | .016 | .52 |
| Power $\beta_1$ | .016 | .029 | .54 | .016 | .60 |
| Security $\beta_1$ | .046 | .029 | 1.62 | .016 | .12 |
| Status $\beta_1$ | .056 | .021 | .63 | .016 | .01 |
| Tradition $\beta_1$ | −.020 | .030 | −.67 | .016 | .51 |
| Hedonistic $\beta_1$ | −.010 | .030 | −.33 | .016 | .74 |
| *Hierarchical culture* | | | | | |
| Intercept $\beta_0$ | .208 | .013 | 16.53 | .004 | .00 |
| Benevolence $\beta_1$ | −.012 | .042 | −.30 | .020 | .77 |
| Economic $\beta_1$ | −.018 | .024 | −.74 | .020 | .47 |
| Power $\beta_1$ | −.041 | .026 | −1.56 | .020 | .13 |
| Security $\beta_1$ | .010 | .030 | .32 | .020 | .75 |
| Status $\beta_1$ | .003 | .023 | .15 | .020 | .89 |
| Tradition $\beta_1$ | −.004 | .023 | −.17 | .020 | .86 |
| Hedonistic $\beta_1$ | −.006 | .024 | −.26 | .020 | .79 |

*Note*: $df = 31$ for intercept calculations, $df = 30$ for hypothesis testing

[a] Variance in level 1 parameter estimates and chi-square test of significant variance

relationship. CEO emotional stability exhibited a similar pattern of relationships, as higher levels of CEO emotional stability were linked to the more internally focused Clan values, while lower levels of emotional stability were linked to the more externally focused Adhocracy and Market culture values. Perhaps CEOs who carry somewhat higher levels of anxiety channel that anxiety into their

organization's culture by creating pressure for change and innovation to ensure a competitive position in the marketplace. Finally, as expected, CEOs with lower levels of openness to experience also had employees who viewed their organizations' culture as characterized by higher levels of hierarchical values. It seems logical that CEO's who are less open to trying new things would foster cultures that encourage stability and control of operations.

Two of the CEO personality traits, extraversion and conscientiousness, were not significantly related to cultures emphasizing any of the four CVI values. For conscientiousness, we did not hypothesize relationships a priori because the primary aspects of this trait, dependability and achievement focus, did not appear to clearly align with any of the characteristics of the four CVI values. However, we did expect that extraversion would be related to an emphasis on several cultural values. Perhaps CEO extraversion is more important for the interpersonal relationships that they form with staff members, and thus is channeled into the way the leader interacts with others, rather than their desires regarding how their organizations should operate. Alternatively, perhaps CEO extraversion is associated with culture values that were not captured by the CVI model. Future research is needed to better understand the relationship (or lack thereof) between CEO extraversion and culture values using both larger sample sizes, as well as a wider range of culture values.

Findings regarding CEO personal values and culture values were less promising. CEO status values were significantly and positively related to the extent to which members viewed their culture as characterized by clan culture values, and significantly and negatively related to the extent to which members viewed their culture as reflecting rational culture values. Clan values emphasize internal operations and flexibility, and rational values emphasize external competitiveness and control. These cultural values are opposites in the CVI model. The few relationships found for leader and cultural values may be due to the less-developed measure of personal values (compared to the five factor model measure used), or simply due to the lack of relationships between leader and organizational culture values. As personal values come to be agreed upon; similar to the five factor model of personality perhaps relationships between these phenomena will be found.

Future research should develop conceptual rationale for these relationships, and examine whether these relationships emerge in a different sample of CEOs and organizations. Along these lines, it is important to recognize that the findings of the current study provide initial evidence of a link between leadership and culture values. Future research is needed to replicate and thus confirm these relationships across different samples of organizations.

## Limitations

There are several limitations of this study that need to be addressed. The first limitation focuses on the size and nature of the sample. The organizations that participated were a volunteer sample, and the extent to which these results may generalize to a random sample of organizations is unclear. Further, in some cases the employee participants were a small subset of the organization, and may not represent the entire organization's perspective of the culture. In addition, the employee participants were not randomly sampled from each organization and most were instead invited by the CEO. Consistent with theory proposed by Schein (2004) and Schneider et al. (1995) regarding the culture creation process, and importance of leaders selecting similar others, we instructed leaders to include those individuals whom they had some influence on their selection. Follow-up questioning with approximately 50% of the CEOs surveyed revealed that the degree of leader influence ranged from direct selection decisions to more casual meetings of candidates before they were hired to give the "ok". However, this approach may have influenced the significant relationships, and raise concerns about the generalizability of the results. The ASA process (Schneider 1987) and leadership theorists (e.g., Schein 2004) suggest and research has substantiated (e.g., Giberson et al. 2005) that leaders tend to hire in their own image. Therefore, it seems reasonable that the individuals selected by the CEO to represent the organization in this study would also hire individuals similar to themselves, who may view the organization and its culture in similar ways. Future research should address these limitations using more random samples of organizations and employee participants. In addition, we suggest that future research should include two employee samples, one being randomly sampled and one including individuals whom the leader had influence on their selection to determine whether the two groups view the organization's culture similarly or differently.

The results are also based on a small sample of organizations. While data were compiled from 499 individual participants, analyses are based on a sample of only 32 separate organizations. The small sample undoubtedly limited the power of the statistical analyses.

The measures selected for this study, particularly the personal values inventory and CVI culture inventory, may be additional limitations. The CVI uses an ipsative scale, meaning that the scores given to each cultural type are dependent on the scores given to the other cultural types (Meade 2004). As a result, the variance for each of the CVI dimensions is not independent, which may have reduced the amount of variability within dimensions; consequently, this may have reduced the magnitude of the correlations. This dependence violates one of the basic assumptions of

classical test theory, independence of error variance, which may have implications for both the statistical analyses and interpretation of ipsative scores (Baron 1996; Bartram 1996). As for the measure of personal values, the Smith et al. (2002) inventory of personal values is a relatively new measure that may not have captured the values most likely to be embedded in an organization's culture. Measures of work values such as that presented by Cable and Edwards (2004) may be a better gauge of values that CEOs embed into their organizations. Additionally, the CVI addressed a narrow range of culture values that may not have adequately captured the range of values that define an organization's culture. Future research should include measures of culture values that address a wider range of values. Additionally, future research should use commensurate measures of CEO values and culture values.

Despite these limitations, this study makes an important contribution to the leadership and culture literatures. As L. K. Williams (1968) noted, studies such as this which include both micro- and macro-level constructs are essential to understand and explain organizational behavior. Moreover, this study has several strengths including a cross-organization sample representing over 10 industries with a wide range of sizes and ages. Obtaining personality and values data from 32 CEOs as well as culture values data from members of their organizations is a challenging task, and may explain why so few researchers have tackled this phenomenon in the past. Additionally, relationships were identified after controlling for size, age, and founder status of the CEO.

## Conclusions and Suggestions for Future Research

Schein (2004) provides specific prescriptions for developing and changing cultures based upon the theoretical relationship between leader characteristics and organizational culture. Given empirical support for his fundamental assumptions, additional research could take a longitudinal approach to investigate the *process* of culture creation, including the means by which cultures develop and change, and specific strategies for managing culture. The results of this study suggest that relationships exist between leader characteristics and cultural values, which may indicate an underlying process; however, they do not reveal the steps contained in the process itself. Researchers could empirically and clinically track the steps organizational founders and leaders take to embed their characteristics and assumptions into the organizations they lead. The choices and decisions founders make throughout the first few years of their organization's lifecycle are likely of particular interest. Using a longitudinal perspective will help to identify the intricacies in the culture formation process.

This study also suggests that leaders may play a critical role in the success or failure of organizational change and development initiatives, which likely proves a significant challenge for such "change leaders." Schneider and Smith (2004) describe the "*myth of infinite flexibility*" (p. 364, emphasis in original); that is, leaders can change their impact on the organization simply by becoming aware of the need to change. Perhaps organizational initiatives that require a change in culture also require a change in leadership if the CEO's personal values and personality characteristics are not aligned with the new direction of the organization. Imposed changes that are inconsistent with the CEO's personal characteristics will likely go unsupported, as leaders may be unable or unwilling to make decisions consistent with needed changes. As a result, perhaps organizations need to "change leaders" to match the requirements of evolving organizational requirements. Future theory and research should focus on the role of leader personality and values in change initiatives.

In conclusion, this study provides some evidence that CEOs' personality and values affect not only their actions and decisions, but also the social environment (i.e., the culture) of the organizations they lead. As a result, the personality of top-level leaders is felt throughout the organization by impacting the types of people who join and remain with the organization, norms that sanction or discourage member behavior and decision making, and patterns of behavior and interaction among members.

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