CEO Humility, Narcissism and Firm Innovation:  
A Paradox Perspective on CEO Traits

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Abstract

We examine how two seemingly contradictory yet potentially complementary CEO traits—humility and narcissism—interact to affect firm innovation. We adopt a paradox perspective and propose that individuals can have paradoxical traits and that, in particular, humility and narcissism can coexist harmoniously, especially among the Chinese, whose philosophical tradition embraces paradoxical thinking and behaving. We hypothesize that CEOs who are both humble and narcissistic will be more likely to have socialized charisma, to cultivate an innovative culture, and to deliver innovative performance. Two studies using multisource data involving 206 Chinese CEOs and 1,163 managers support our hypotheses and point to new directions for studying CEO traits and their effects on firm outcomes.

Keywords: humility, narcissism, paradox, socialized charisma, firm innovation
Innovation, or the processes and outcomes of firms in developing and producing new products, services, markets, methods of production, and/or management systems, is “widely regarded as a critical source of competitive advantage” for firm survival and success (Crossan & Apaydin, 2010, p. 1154). What might differentiate CEOs who are more or less able to promote firm innovation? Rosing, Frese, and Bausch (2011) to propose that a combination of leadership styles, rather than any particular one, might be more predictive of innovation. We build on that idea and examine whether two seemingly contradictory yet potentially complementary CEO traits, humility and narcissism, may interact to affect firm innovation.

Research on CEO humility and CEO narcissism has largely evolved along parallel but independent paths. Humility is grounded in a self-view of subordination to something greater and is behaviorally manifested as being self-aware, appreciating others, and being open to self-improvement (Morris, Brotheridge, & Urbanski, 2005; Ou, Tsui, Kinicki, Waldman, Xiao, & Song, 2014; Owens, Johnson, & Mitchell, 2013). Humble CEOs empower top and middle managers, prefer pay parity and ambidextrous strategy, and are expected to deliver sustainable firm performance (Collins, 2001; Ou et al., 2014; Ou, Waldman, & Peterson, in press). Yet, they are also thought to lack charisma and the ability to perform in dynamic industries (Chatterjee & Hambrick, 2007; Collins, 2001).

While extreme narcissism can be a serious psychological disorder (American Psychiatric Association, 2000), subclinical narcissism—often in the form of grandiose narcissism—is increasingly recognized as a personality trait that can be observed in normal populations (for reviews, Emmons, 1987; Grijalva, Harms, Newman, Gaddis, & Fraley, 2015). In line with the leadership literature, we do not focus on pathological narcissism but define narcissism as an orientation of having a grandiose or inflated self-view and craving recognition to affirm it (Chatterjee & Hambrick, 2007; Galvin, Lange, & Ashforth, 2015; Zhu & Chen, 2015). Narcissistic CEOs prefer dynamic strategies and extreme risk-taking investments and can more quickly increase firm performance after crises, yet they show extreme fluctuations in performance and are less attentive to objective performance cues and more to social praise (Chatterjee & Hambrick, 2007; Zhu & Chen, 2015).

Considering that humility and narcissism both have positive and negative organizational consequences, could they complement each other in a way that enhances their benefits and suppresses their drawbacks so as to foster innovation? Our study explores this possibility by adopting a paradox perspective on personality traits (Smith & Lewis, 2011). We test our hypotheses with two multisource studies of 206 Chinese CEOs and 1,163 managers, and contribute to the literature on the relationship between leadership and innovation by confirming the effect of a novel pair of complementary leader
traits on firm innovation.

**Theoretical Background and Hypotheses**

Humility and narcissism, although independent, complement each other and “are both vital for long-term success” (Schad et al., 2016, p. 19). We propose that their coexistence may be beneficial for CEOs in managing innovation. Since innovation can be regarded as both a process and an outcome (Crossan & Apaydin, 2010), we focus on both innovative culture (the process aspect) and innovative performance (the outcome aspect) for a comprehensive understanding of innovation (Crossan & Apaydin, 2010).

**CEO humility, narcissism, and firm innovative culture**

Innovative cultures emphasize shared values of flexibility, adaptation, growth, risk taking, change, and entrepreneurship (Hartnell, Ou, & Kinicki, 2011). CEOs are the primary influence on creating and modifying organizational cultures (Tsui, Zhang, Wang, Xin, & Wu, 2006). According to Schein (2010), CEOs are effective in shaping culture when they are able to engage in two mutually reliant activities: (1) endorsing management practices that support organizational values (Fulmer & Ostrofee, 2016) and (2) serving as high-profile living artifacts to symbolize and justify organizational values. Management practices orient employees’ mindsets toward certain values (such as innovation), but without living artifacts and role models, employees may interpret management practices as mere formalities and fail to internalize the values (Lau & Ngo, 2004). CEOs serving as living artifacts and fervently advocating certain values may help cultivate an organizational culture (Howell & Higgins, 1990), but without endorsing management practices that legitimize and routinize those values, the CEO’s advocacy may be seen as lip service and employees will not identify strongly with the advocated values (Schein, 2010). As the two activities are mutually reliant, CEOs are unlikely to be effective in cultivating culture if they excel in one but not the other.

CEOs with high humility but low narcissism may be ineffective in cultivating innovative culture because they are good at endorsing management practices but not at serving as living artifacts. Humble CEOs know their constraints, value others’ contributions, and willingly establish platforms that allow others to excel (Owens & Hekman, 2012). Therefore, they are more likely to endorse management practices such as recruiting and promoting capable innovators (Drucker, 1992), empowering employee entrepreneurship, and rewarding innovative contributions (Morris et al., 2005). However, purely humble CEOs may be unable to serve as living artifacts of innovation or symbolically represent innovation values, because they tend to keep low profiles and lack the needed
visibility to the employees, particularly to those who are not their direct reports and have few direct interactions with the CEO (Ou et al., 2014).

Pure narcissists without humility can be ineffective in cultivating an innovative culture as well, because they are more likely to serve as living artifacts but less likely to endorse innovation-supportive management practices. Narcissists are attracted to a sense of novelty to reassure their superior self-views and are interested in drawing attention to themselves (Chatterjee & Hambrick, 2007). Therefore, they are willing to advocate innovation and to publicly model and encourage innovative behaviors through speeches, emails, or letters (Gerstner, König, Enders, & Hambrick, 2013; Rosenthal & Pittinsky, 2006). However, because they are guided by a self-centered view of the world (Rosenthal & Pittinsky, 2006), they tend to overestimate their contributions, feel threatened by talented innovators, and take credit for others’ efforts (Chatterjee & Hambrick, 2007). As a result, they may be reluctant to endorse management practices that recruit, reward, or promote innovators.

We therefore propose that humility and narcissism complement each other and enable CEOs to simultaneously engage in both types of activity to foster innovation culture:

*Hypothesis 1a: The interaction of a CEO’s humility and narcissism will be positively associated with the firm’s innovative culture, such that the relationship between CEO humility and firm innovative culture will be stronger when CEO narcissism is high than when it is low.*

**CEO humility, narcissism, and firm innovative performance**

Similarly, we propose that CEOs who are both humble and narcissistic will be better able to deliver innovative performance. Innovation requires companies to simultaneously exploit existing knowledge, skills, and processes and explore new ones (March, 1991). Companies that only pursue exploration may fall into *failure traps* in which they constantly engage in costly experiments, fail to produce results and benefit from them, and face immediate survival threats as they exhaust their resources (Siggelkow & Rivkin, 2006). Companies that only pursue exploitation may fall into *competency traps* in which they are satisfied with their success, fail to notice unexpected environmental changes, and become unsustainable in the long run (Levinthal & March, 1993). In other words, innovation is only possible when companies simultaneously exploit the known for resources to support the exploration of the unknown and explore the unknown to revive the current exploitation and make future exploitation possible (Atuahene-Gima, 2005).

Purely humble CEOs may not deliver effective innovative performance because they are more likely to exploit than explore. Grounded in an understanding of self-imperfection, humble individuals often recognize the need to improve themselves (Owens & Hekman, 2012). In CEOs, this may
manifest in constant efforts to incrementally improve and refine existing practices and products (Vera & Rodriguez-Lopez, 2004). However, humble CEOs may be less likely to engage in radical exploration. Because they tend to process information comprehensively (Morris et al., 2005) and take well-calculated risks, they tend to consider radical exploration as too risky.

Pure narcissists may be ineffective in innovation because they often favor radical exploration rather than incremental exploitation. Radical exploration satisfies their need for attention (Emmons, 1987) while their sense of superiority enables them to maintain optimism and persistence when facing the difficulties of entirely new projects (Chatterjee & Hambrick, 2007). However, they may be unwilling to engage in exploitation, seeing incremental refinements as mundane and boring (Drucker, 1992).

We therefore propose that combined humility and narcissism will enable CEOs to both exploit the known and explore the unknown to achieve innovative performance:

Hypothesis 1b: The interaction of a CEO’s humility and narcissism will be positively associated with the firm’s innovative performance, such that the relationship between CEO humility and firm innovative performance will be stronger when CEO narcissism is high than when it is low. 

CEO humility, narcissism, and socialized charisma

Research on the interaction of humility and narcissism has focused on testing whether the interaction produces positive effects (e.g., Owens et al., 2015). We aim to advance the research by examining how the positive interaction effect occurs and we propose socialized charisma as a mediating mechanism linking CEO trait interaction to innovative culture and performance.

Leaders foster perceptions of socialized charisma by engaging in two mutually reliant activities: (1) developing socialized visions which emphasize shared values and moral justifications, collective identity, and followers’ worth and efficacy and (2) inspirationally communicating their visions to followers (House & Howell, 1992). Leaders are unable to solicit socialized charisma if they have socialized visions but do not effectively communicate them (Conger & Kanungo, 1987); neither can they solicit socialized charisma if they can inspirationally communicate a vision but it lacks socialized contents (Galvin et al., 2010).

Humble CEOs without narcissism may be less effective in gaining socialized charisma. Driven by ecosystem motivation and low self-focus, they are willing to fight for the collective good (Ou et al., 2014) and, being open-minded and attentive to follower voices, they are more able to incorporate followers’ input into their visions (Nielsen et al., 2010). But they tend to keep low profiles and willingly admit mistakes and limitations; therefore, they may not be ideal in generating
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excitement and optimism. In addition, for distant followers who don’t know the CEOs in person, openness can be mistaken as incompetency, thus reducing followers’ inclination to ascribe socialized charisma to them (Owens et al., 2013).

Purely narcissistic CEOs may also be less effective in gaining socialized charisma. Driven by inflated self-views and hunger for attention, they communicate visions skillfully (Galvin et al., 2010), using inspirational rhetoric to paint a compelling future, boldly demonstrate their capabilities, convey supreme confidence and certainty to followers, and remove concerns about risk or resource constraints (Maccoby, 2004). However, the vision they offer is less likely to be a socialized one because they mainly care about their own agenda rather than their followers’ well-being (Hogan, Raskin, & Fazzini, 1990; Rosenthal & Pittinsky, 2006).

We therefore propose that CEOs with both humility and narcissism are more likely to have socialized charisma because they can offer socialized visions and can inspirationally communicate them to followers:

Hypothesis 2: The interaction of a CEO’s humility and narcissism will be positively associated with his or her socialized charisma, such that the relationship between the CEO’s humility and his or her socialized charisma will be stronger when his or her narcissism is high than when it is low.

We further propose that socialized charisma mediates the links between CEO traits and innovative culture and performance. Because charismatic leaders are unsatisfied with the status quo and desire to break established routines (Tucker, 1968), they are willing to support management practices that promote innovation (Jung et al., 2003). In addition, they are inspiring advocates of appealing and challenging socialized visions (Galvin et al., 2010). They make employees realize that although the visions are attractive, they will not be easy to achieve, so employees must question their own assumptions, deal with old situations in new ways, take personal risks, make sacrifices, and work beyond what is required (House & Howell, 1992).

Socialized charismatic CEOs not only communicate the vision, they also act as living artifacts for innovation. By personally displaying unconventional and risk-taking behaviors (Conger & Kanungo, 1987), they signal that innovation is highly valued in the organization (Wang, Rode, Shi, Luo, & Chen, 2013). In this way, they encourage employees to explore and experiment, thus instilling innovative values (Jung et al., 2003).

Socialized charisma enables CEOs not only to better promote innovative culture, but also to better deliver innovative performance. Socialized charismatic leaders are capable of enthusing
employees with socialized visions that require innovation and gaining employees’ commitment to support innovation (Howell & Higgins, 1990). Socialized charismatic CEOs emphasize collective interests with their skillful use of rhetoric (Bligh, Kohles, & Meindl, 2004; House & Howell, 1992) and express confidence in employees’ abilities (House, Spangler, & Woycick, 1991), making innovation meaningful and intrinsically motivating to employees. Therefore, employees, whether working on exploitation or exploration, are motivated to exceed performance expectations.

Combining the logic for Hypotheses 1a, 1b, and 2, we propose that socialized charisma is one mechanism linking CEO traits to innovation. Therefore, we propose:

Hypothesis 3a: A CEO’s socialized charisma will partially mediate the interactive effect of his or her humility and narcissism on the firm’s innovative culture.

Hypothesis 3b: A CEO’s socialized charisma will partially mediate the interactive effect of his or her humility and narcissism on the firm’s innovative performance.

Method

We used two studies to test the hypotheses. Study 1 tested hypotheses H1a and H3a involving innovative culture. Study 2 tested hypotheses H1b and H3b involving innovative performance. Both studies tested H2 concerning socialized charisma. The two studies are complementary. Study 1 used a longitudinal and multisource design and full measures of study variables but with a smaller sample of 63 CEOs. Study 2 used a larger sample of 143 CEOs but with a cross-sectional design and shortened measures. We used other-report humility in Study 1 and self-report humility in Study 2 to provide a more comprehensive assessment of humility effects (Colbert, Judge, Choi, & Wang, 2012).

Study 1

Sample and data collection procedure

Study 1 was part of a larger research project involving a sample of 63 CEOs, 328 TMT members, and 645 middle managers. The sample came from an alumni database at a Chinese business school on the eastern shore of China. We collected survey data from participants at two different times. In the Time 1 survey, CEOs reported their own narcissism, while TMT members evaluated CEOs’ humility. At Time 2 (approximately two weeks later), TMT members assessed CEOs’ socialized charisma, and middle managers assessed firm innovative culture. TMT members subjectively rated firm performance as a control variable.

Measures

All measures in this study used six-point scales ranging from 1 = strongly disagree to 6 = strongly agree. CEO humility, socialized charisma, and firm innovative culture were aggregated from
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individual-level data, justified by significant ANOVA $F$ statistic, higher than .70 average $r_{wg}$ (James, Demaree, & Wolf, 1984), and non-zero Intraclass Correlation (ICC; Bliese, 2000). We adopted the most commonly used rectangular distribution to calculate $r_{wg}$ (Meyer, Mumford, Burrus, Campion, & James, 2014).

**Humility.** We measured humility with nine items developed by Owens et al. (2013), which have demonstrated good reliability and validity in Chinese samples (Ou et al., 2014). Cronbach’s alpha was .86. The aggregation statistics were acceptable: ANOVA $F (62, 265) = 1.40, p < .05$; Mean $r_{wg} = .91$ ($SD = .18$); ICC (1) = .07; ICC (2) = .29.

**Narcissism.** We used 14 items from NPI-16 (Ames et al., 2006) which is one of the most recognized measures of non-pathological, grandiose narcissism (Miller et al., 2014). We excluded two items “I think I am a special person” and “I like to be the center of attention” because of semantic similarity with other items. Cronbach’s alpha was .86.

**Socialized charisma.** Following Brown and Trevino (2006) and Galvin et al. (2010), we used two dimensions (idealized influence and inspirational motivation) of the Multifactor Leadership Questionnaire (MLQ, Bass & Avolio, 1995) comprising 12 items to measure socialized charisma. Although Bass and Avolio (1995) did not explicitly argue that these dimensions indicate socialized charisma, Bass and Steidlmeier (1999) recognized that the charisma components in transformational leadership theory is in essence authentic and socialized charisma, which is grounded in moral foundations and concerns collective interests. Cronbach’s alpha was .91. The aggregation was justifiable: ANOVA $F (62, 265) = 2.75, p < .01$; Mean $r_{wg} = .95$ ($SD = .06$); ICC (1) = .25; ICC (2) = .64.

**Firm innovative culture.** We measured this construct by four items from the adhocracy dimension of the Organizational Culture Assessment Instrument (OCAI) (Cameron & Quinn, 2006). Sample items are: “The organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks,” and “The glue that holds the organization together is commitment to innovation and development. There is an emphasis on being on the cutting edge.” Cronbach’s alpha for this scale was .76. The aggregation was supported: ANOVA $F (62, 265) = 3.12, p < .01$; Mean $r_{wg} = .87$ ($SD = .07$); ICC (1) = .17; ICC (2) = .68.

**Control variables.** We controlled for CEOs’ age, company tenure, gender, education, and founder status, as well as firm performance, firm size, and firm age for their potential influences on charisma and innovation.

**Analysis**
We followed hierarchical multiple regression procedures (Cohen, Cohen, West, & Aiken, 2003) to test Hypotheses 1a and 2 which suggest an interactive effect of CEO humility and narcissism on outcomes. Hypothesis 3a concerns the mediating role of socialized charisma. We followed Preacher and Hayes’s (2004) method with 10,000 bootstrap samples. Because mediation tests based on small samples can be skewed by extreme outliers (Hayes, 2013), we conducted multivariate outlier analysis following Stevens (1984) and calculated Mahalanobis $D^2$ using all predictors in the regression. We identified one outlier, a much older firm (age = 57) than the other firms in the sample (averaged age = 14). We tested the hypotheses including and excluding the outlier and reported both results. The results were generally consistent but those without the outliers were slightly stronger.

**Results**

Table 1 shows descriptive statistics and correlations. CEO humility and narcissism were not related, suggesting that the two traits were not two ends of one continuum. CEO humility was positively related to socialized charisma and firm innovative culture, but CEO narcissism was related to neither outcomes.

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Table 2 summarizes the results of hypotheses testing. We tested the hypotheses including and excluding the outlier and reported both results. The results were generally consistent but those without the outlier were slightly stronger. For reporting clarity, we name the sample with the outlier as sample 1 ($N = 63$), and the sample without the outlier as sample 2 ($N = 62$).

For firm innovative culture, Model 5 shows that neither CEO humility nor narcissism had a significant effect, but the interaction term in Model 6 was significant (sample 1: $\beta = .28, p < .05$; sample 2: $\beta = .27, p < .05$), accounting for an additional 7% of total variance (sample 1: $\Delta R^2 = .07, p < .05$; sample 2: $\Delta R^2 = .07, p < .05$). Hypothesis 1a was supported. Figure 1 is based on sample 1 and shows that CEO humility and firm innovative culture had a positive and significant relationship when narcissism was high, but an insignificant relationship when narcissism was low. Results based on sample 2 show similar patterns.

For socialized charisma, Model 2 shows that both CEO humility and narcissism had positive effects. Supporting Hypothesis 2, the coefficient for the interaction term in Model 3 was positive, and the effect was slightly stronger when using sample 2 which excludes the outlier (sample 1: $\beta = .20, p < .10$; sample 2: $\beta = .22, p < .05$), explaining about an additional 5% of total variance (sample 1: ...
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$\Delta R^2 = .04, p < .10$; sample 2: $\Delta R^2 = .05, p < .05$). Figure 2 is based on sample 1 and shows that humility and socialized charisma had a positive and significant relationship when narcissism was high, but an insignificant relationship when narcissism was low. Results based on sample 2 show similar patterns.

For Hypothesis 3a, the results based on sample 1 suggest marginal significance of the indirect effect of socialized charisma (indirect effect = .08, 95% CI = [.01, .28], 90% CI = (.00, .25]). However, after excluding the outlier, results based on sample 2 suggest that socialized charisma fully mediates the relationship between interaction term and firm innovative culture, that is, the indirect effect is .09 (95%CI = (.00, .36)) and the direct effect is .28 (95%CI = [-.09, .65]). In addition, a moderated mediation test (Preacher, Rucker, & Hayes, 2007) showed that the indirect effect from CEO humility to innovative culture via socialized charisma is significant (indirect effect = .16, 95% CI = [.01, .48]) when narcissism was high but was insignificant (indirect effect = .04, 95% CI = [-.03, .22]) when narcissism was low. In summary, Study 1 fully supported Hypothesis 1a regarding innovative culture as an outcome, and Hypothesis 2 regarding socialized charisma as an outcome. For Hypothesis 3a, the results based on Study 1 show that socialized charisma is a full mediator rather than partial mediator.

Study 2

**Sample and procedures**

We obtained data from the Chinese Entrepreneur Survey System (CESS), a survey platform hosted by the Chinese State Council with a pool of 5,000 firms in various industries and locations. We randomly selected 200 firms and surveyed their CEOs and TMT members. We received 194 CEO replies, among which 143 had matched TMT replies (response rate = 71.5%). The final sample included 143 CEOs and 190 TMT members. No statistically significant differences were found on CEO demographics and firm size between firms with and without TMT respondents. CEOs reported their own humility and narcissism, as well as demographics and firm size as control variables. TMT members assessed CEOs’ socialized charisma and firm innovation performance, and reported firm performance as a control variable.

**Measures**

To increase response rate (Bednar & Westphal, 2006), we used abbreviated measures of humility, narcissism, and socialized charisma (see Appendix I for items included in the abbreviated
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measures). We followed Stanton, Sinar, Balzer and Smith’s (2002) recommendations and selected items that met internal, judgmental, and external quality criteria and exhibited convergent, discriminant, criterion-related validity, and reliability (see Appendix II for detailed procedures). For the 31 firms with more than one TMT respondent, we averaged responses after assessing \( r_{wg} \) based on rectangular distributions.

**Humility** was measured by four items from Owens et al. (2013). Cronbach’s alpha was .75. **Narcissism** was measured by four items from Ames et al. (2006). Cronbach’s alpha was .77.

**Socialized charisma** was measured by six items adapted from the Multifactor Leadership Questionnaire (MLQ, Bass & Avolio, 1995). Cronbach’s alpha was .83. For firms with more than one TMT response, mean \( r_{wg} = .97 \) (SD = .05).

**Firm innovative performance.** We used five items from a six-item scale by Calantone et al. (2002) to measure firm innovative performance. Sample items include “Our new product introduction has increased over the last 5 years,” and “Our company is often the first to market with new products and services.” One reverse-coded item, “innovation in our company is perceived as too risky and is resisted,” was deleted because it expressed confusing meanings and substantially reduced scale reliability. Cronbach’s alpha of the remaining items was .81. For firms with more than one TMT response, mean \( r_{wg} = .95 \) (SD = .08).

**Control variables.** We included most of the control variables used in Study 1 except CEOs’ founder status and firm age because the data were unavailable. CEOs’ education level was measured by number of years. We used a more fine-grained measure of firm performance with seven items concerning firm profit, sales, sales growth, market share, employee morale, asset growth, and competitive positioning in the industry (Wang, Tsui, Zhang, & Ma, 2003). Cronbach’s alpha was .92.

**Results**

Table 3 shows descriptive statistics and correlations of variables for Study 2. Similar to Study 1, humility and narcissism were unrelated. Neither CEO humility nor narcissism had significant correlations with socialized charisma and innovative performance.

| Insert Table 3 about here |

Table 4 summarizes the results of hypotheses testing. Firm innovative performance was not associated with either humility or narcissism in Model 5, but was associated with their interaction

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1 Cronbach’s alpha of the full scale including six items was .64.
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term ($\beta = .19, p < .05$) in Model 6, and the change in R-square was significant ($\Delta R^2 = .03, p < .05$), supporting Hypothesis 1b. Figure 3 shows that humility and firm innovation performance had a positive and significant relationship when narcissism was high but an insignificant relationship when narcissism was low.

When using socialized charisma as the dependent variable, neither humility nor narcissism had main effects (Model 2). However, the interaction term significantly predicted socialized charisma ($\beta = .20, p < .05$) in Model 3, explaining an additional $2\%$ ($p < .05$) of total variance. This result was consistent with that in Study 1, and supported Hypothesis 2. As Figure 4 shows, humility and socialized charisma had a significant and positive association when narcissism was high but no association when narcissism was low. Consistent with Hypothesis 3b, the mediated effect of the interaction of humility and narcissism on firm innovative performance via socialized charisma was .06, and the 95% confidence interval excluded zero (95% CI = (.00, .18)). However, with the presence of socialized charisma as a mediator, the direct effect of the interaction term on innovative performance became insignificant (direct effect = .24, 95% CI = [-.03, .51]), suggesting that socialized charisma was a full, instead of partial, mediator in this study. The moderated mediation test (Preacher et al., 2007) indicated that CEO humility was significantly associated with innovative performance via socialized charisma when narcissism was high (indirect effect = .09, 95%CI = [.01, .25]) but the effect was insignificant when narcissism was low (indirect effect = -.02, 95%CI = [-.10, .06]). In summary, Study 2 significantly supported Hypotheses 1b and 2, and socialized charisma fully mediated the link between CEO traits and firm innovative performance.

Insert Table 4, Figures 3 and 4 about here

Discussion

Theoretical implications

By adopting a paradox perspective to investigate the interaction effect of CEO humility and narcissism on firm innovation, we contribute to the strategic leadership literature, particularly to research on CEO humility and narcissism and on how leadership traits may influence firm innovation. For the strategic leadership literature, paradox offers a novel and valuable perspective with which to examine CEO traits. Knowledge about CEO traits usually focuses on the independent effects of a trait or traits on firm outcomes (for a review, Finkelstein et al., 2009). The paradox perspective provides an alternative explanation by suggesting that traits may interact to affect outcomes. This perspective
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contrasts with previous research holding that possessing contradictory traits is harmful and pathological. Instead, we show that CEOs who have simultaneous humility and narcissism can increase employee perceptions of socialized charisma and can effectively lead firm innovation.

Our study is the first to examine the connection of paradoxical leader traits with firm innovation and is among the few to test leaders’ roles in promoting innovative cultures and delivering innovative performance (cf. Jung et al., 2008). Our findings further suggest that contradictory traits can become complementary by interacting to positively impact innovation (cf. Makri & Scandura, 2010). This interactive approach may be valuable in examining other potentially paradoxical leadership approaches or styles.

Practical implications

Our findings have important practical implications. First, we recommend that executive recruiters evaluate candidates more comprehensively. While recruiters have traditionally favored larger-than-life or narcissistic CEOs (Khurana, 2002), they may consider the accumulating evidence showing the benefits of CEO humility (Ou et al., 2014; Ou et al., in press) and the weaknesses of CEO narcissism (Chatterjee & Hambrick, 2007). Selecting applicants who are simultaneously humble and narcissistic may be a beneficial alternative, at least in East Asian contexts where psychological contradictions are well accepted.

Limitations and future research directions

Both of our empirical studies had limitations. In Study 1, we gathered responses at two times and from two hierarchical levels (top management teams and middle managers), but we had a relatively small sample of 63 CEOs. In Study 2, we obtained a larger CEO sample but had a cross-sectional design and used abbreviated measures. However, the two studies are complementary and generate consistent findings. For stronger causal inferences, future research might conduct a longitudinal design with full measures of humility, narcissism, and socialized charisma and objective measures of innovation. In addition, we did not include both innovation criteria in one single study, so we could not completely replicate the findings or test innovative culture as a mediator between CEO traits and innovative performance.
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References


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### Table 1
*Means, Standard Deviations, and Inter-correlations for Variables in Study 1*

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<th>Variables</th>
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<th>SD</th>
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<tbody>
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<td>1 CEO socialized charisma</td>
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<td>2 Firm innovative culture</td>
<td>4.04</td>
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<td>3 CEO humility</td>
<td>4.68</td>
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<td>4 CEO narcissism</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 CEO age (years)</td>
<td>41.70</td>
<td>9.21</td>
<td>.09</td>
<td>-.01</td>
<td>.23†</td>
<td>-.08</td>
<td>.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 CEO company tenure (years)</td>
<td>9.71</td>
<td>5.12</td>
<td>.09</td>
<td>-.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 CEO gender (1=men; 0=women)</td>
<td>0.89</td>
<td>0.32</td>
<td>-.10</td>
<td>.07</td>
<td>.07</td>
<td>-.01</td>
<td>.18</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 CEO education</td>
<td>4.32</td>
<td>1.03</td>
<td>.25*</td>
<td>.16</td>
<td>.06</td>
<td>.00</td>
<td>.06</td>
<td>-.12</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 CEO founder status (1=founder; 0=non founder)</td>
<td>0.71</td>
<td>0.46</td>
<td>.19</td>
<td>-.11</td>
<td>-.15</td>
<td>.08</td>
<td>.14</td>
<td>.09</td>
<td>-.22†</td>
<td>-.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Firm performance</td>
<td>4.26</td>
<td>1.41</td>
<td>.25*</td>
<td>.24†</td>
<td>.13</td>
<td>.10</td>
<td>-.13</td>
<td>.11</td>
<td>-.32**</td>
<td>.17</td>
<td>-.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Firm size (Ln of no. of employees)</td>
<td>5.57</td>
<td>1.42</td>
<td>.16</td>
<td>-.08</td>
<td>.11</td>
<td>-.13</td>
<td>.15</td>
<td>.23†</td>
<td>.17</td>
<td>-.16</td>
<td>-.27*</td>
<td>-.11</td>
<td></td>
</tr>
<tr>
<td>12 Firm age</td>
<td>14.03</td>
<td>9.22</td>
<td>.01</td>
<td>.06</td>
<td>.21</td>
<td>-.14</td>
<td>-.02</td>
<td>.22†</td>
<td>.13</td>
<td>-.05</td>
<td>-.54**</td>
<td>.09</td>
<td>.35**</td>
</tr>
</tbody>
</table>

*Note. N = 63. †p < .10; *p < .05; **p < .01.*
## CEO HUMILITY AND NARCISSISM

### Table 2

*Standardized Results of Hierarchical Multiple Regressions in Study 1*

<table>
<thead>
<tr>
<th>Control variables</th>
<th>Socialized charisma</th>
<th>Firm innovative culture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>CEO age</td>
<td>.04</td>
<td>-.02</td>
</tr>
<tr>
<td>CEO company tenure</td>
<td>.02</td>
<td>-.08</td>
</tr>
<tr>
<td>CEO gender</td>
<td>.04</td>
<td>.03</td>
</tr>
<tr>
<td>CEO education</td>
<td>.27**</td>
<td>.22†</td>
</tr>
<tr>
<td>CEO founder status</td>
<td>.39*</td>
<td>.45**</td>
</tr>
<tr>
<td>Firm performance</td>
<td>.26*</td>
<td>.25†</td>
</tr>
<tr>
<td>Firm size</td>
<td>.27*</td>
<td>.24†</td>
</tr>
<tr>
<td>Firm age</td>
<td>.12</td>
<td>.28†</td>
</tr>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO humility</td>
<td>.36**</td>
<td>.34**</td>
</tr>
<tr>
<td>CEO narcissism</td>
<td>.20†</td>
<td>.19†</td>
</tr>
<tr>
<td><strong>Interaction effect</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO humility × narcissism</td>
<td>.20†</td>
<td>.22*</td>
</tr>
</tbody>
</table>

\[
\begin{align*}
R^2 & = .25 & .26 & .39 & .38 & .42 & .43 & .11 & .11 & .15 & .15 & .22 & .22 \\
\Delta R^2 & = .14** & .12** & .04† & .05* & .04 & .04 & .07* & .07* & & & & \\
\end{align*}
\]

*Note:* S1 = sample 1 (N = 63); S2 = sample 2 (N = 62, removing an outlier); †p < .10; *p < .05; **p < .01
### Table 3
**Means, Standard Deviations, and Inter-correlations for Variables in Study 2**

| Variables                               | M   | SD  | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   |
|-----------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. CEO socialized charisma              | 4.18| 0.51|     |     |     |     |     |     |     |     |     |     |
| 2. Firm innovative performance          | 3.73| 0.64|     |     |     |     |     |     |     |     |     |     |
| 3. CEO humility                         | 5.26| 0.40|     |     |     |     |     |     |     |     |     |     |
| 4. CEO narcissism                       | 3.91| 0.87|     |     |     |     |     |     |     |     |     |     |
| 5. CEO age (years)                      | 51.91| 7.42|     |     |     |     |     |     |     |     |     |     |
| 6. CEO company tenure (years)           | 17.82| 10.73|     |     |     |     |     |     |     |     |     |     |
| 7. CEO gender (1= men; 0 = women)       | 0.90| 0.30| -.16*| -.12| -.21**| -.19*| .10| .12|     |     |     |     |
| 8. CEO education (years)                | 16.41| 3.27|     |     |     |     |     |     |     |     |     |     |
| 9. Firm performance                     | 3.67| 0.55| .23**| .51**| .04| .08| -.01| .00| -.15*| .05|     |     |
| 10. Firm size (Ln of no. of employees)  | 6.15| 1.42|     |     |     |     |     |     |     |     |     |     |

*Note. N = 143. *p < .05; **p < .01.*
### Table 4

**Standardized Results of Hierarchical Multiple Regressions in Study 2**

<table>
<thead>
<tr>
<th></th>
<th>Socialized charisma</th>
<th>Innovation performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO age</td>
<td>.02</td>
<td>.03</td>
</tr>
<tr>
<td>CEO company tenure</td>
<td>.03</td>
<td>.03</td>
</tr>
<tr>
<td>CEO gender</td>
<td>-.12</td>
<td>-.11</td>
</tr>
<tr>
<td>CEO education</td>
<td>-.16†</td>
<td>-.15</td>
</tr>
<tr>
<td>Organizational</td>
<td>.23**</td>
<td>.23**</td>
</tr>
<tr>
<td>performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm size</td>
<td>.07</td>
<td>.07</td>
</tr>
<tr>
<td>Main effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO humility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO narcissism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO humility × narcissism</td>
<td>.20*</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.10</td>
<td>.11</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.10*</td>
<td>.01</td>
</tr>
</tbody>
</table>

Note. $N = 143$. †$p < .10$; *$p < .05$; **$p < .01$. 
CEO HUMILITY AND NARCISSISM

Figure 1. The interaction of CEO humility and CEO narcissism on firm innovative culture in Study 1

Figure 2. The interaction of CEO humility and CEO narcissism on socialized charisma in Study 1
CEO HUMILITY AND NARCISSISM

Figure 3. The interaction of CEO humility and CEO narcissism on firm innovative performance in Study 2

Figure 4. The interaction of CEO humility and CEO narcissism on socialized charisma in Study 2

Appendix I
CEO HUMILITY AND NARCISSISM

Humility, Narcissism, and Socialized Charisma Scale Items

**Humility**
1. This person actively seeks feedback, even if it is critical.
2. This person admits it when he or she does not know how to do something.*
3. This person acknowledges when others have more knowledge and skills.
4. This person takes notice of others’ strengths.
5. This person often compliments others on their strengths.
6. This person shows appreciation for the unique contributions of others.*
7. This person is willing to learn from others.
8. This person is open to the ideas of others.*
9. This person is open to the advice from others.*

**Narcissism**
1. I know that I am good because everybody keeps telling me so.
2. I like having authority over people.
3. I find it easy to manipulate people.
4. I insist upon getting the respect that is due to me.*
5. I am apt to show off if I get the chance.
6. I always know what I am doing.
7. Everybody likes to hear my stories.
8. I expect a great deal from other people.
9. I really like to be the center of attention.*
10. People always seem to recognize my authority.
11. I am going to be a great person.
12. I can make anybody believe anything I want them to.
13. I am more capable than other people.*
14. I think I am an extraordinary person.*

**Socialized Charisma**

**Idealized influence**
1. He/she instills pride in others for being associated with him/her.*
2. He/she goes beyond self-interest for the good of the group.*
3. He/she acts in ways that build others’ respect for me.
4. He/she displays a sense of power and confidence.*
5. He/she talks about his/her most important values and beliefs.
6. He/she specifies the importance of having a strong sense of purpose.
7. He/she considers the moral and ethical consequences of decisions.
8. He/she emphasizes the importance of having a collective sense of mission.*

**Inspirational motivation**
9. He/she talks optimistically about the future.
10. He/she talks enthusiastically about what needs to be accomplished.*
11. He/she articulates a compelling vision of the future.*
12. He/she expresses confidence that goals will be achieved.

Note: *items used in Study 2.
CEO HUMILITY AND NARCISSISM

Appendix II

Summary of Measure Length Reduction Procedure for Study 2

We used abbreviated measures of humility, narcissism, and socialized charisma in Study 2. We utilized data from Study 1 to shorten the measures of humility, narcissism, and socialized charisma based on Stanton et al. (2002)’ three criteria. Specifically, items selected should (1) have internal quality by showing reasonably high factor loading contributions to and correlations with the full measure, (2) have judgmental quality by showing reasonable coverage of the construct content domain and demonstrating clarity, face validity, and relevance to the sample, and (3) have external quality by showing reasonable connection with variables within the construct’s nomological network. We also assessed the reliability, convergent, discriminant, and criterion-related validities of the shortened measures using data from Study 1.

1) For internal quality, most items in the shortened measure exhibited reasonably high factor loading contributions to and correlations with the full measure. A few of items had slight lower factor loadings and correlations with the full measure, but we decided to use them because they covered important non-redundant aspects in the construct content domain.

### Humility: N = 328 (TMT members who assessed CEOs)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor loading</th>
<th>Item Correlation with the full measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. This person admits it when he or she does not know how to do something.</td>
<td>.62</td>
<td>.63**</td>
</tr>
<tr>
<td>6. This person shows appreciation for the unique contributions of others</td>
<td>.70</td>
<td>.67**</td>
</tr>
<tr>
<td>8. This person is open to the ideas of others.</td>
<td>.75</td>
<td>.74**</td>
</tr>
<tr>
<td>9. This person is open to the advice from others.</td>
<td>.75</td>
<td>.74**</td>
</tr>
<tr>
<td><strong>Item average of the full measure</strong></td>
<td><strong>.70</strong></td>
<td><strong>.70</strong></td>
</tr>
</tbody>
</table>

### Narcissism: N = 63 (CEO self-report)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor loading</th>
<th>Item Correlation with the full measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. I insist upon getting the respect that is due to me.</td>
<td>.44</td>
<td>.46**</td>
</tr>
<tr>
<td>9. I really like to be the center of attention.</td>
<td>.73</td>
<td>.72**</td>
</tr>
<tr>
<td>13. I am more capable than other people.</td>
<td>.77</td>
<td>.77**</td>
</tr>
<tr>
<td>14. I think I am an extraordinary person.</td>
<td>.50</td>
<td>.53**</td>
</tr>
<tr>
<td><strong>Item average of the full measure</strong></td>
<td><strong>.60</strong></td>
<td><strong>.61</strong></td>
</tr>
</tbody>
</table>

### Socialized Charisma: N = 328 (TMT members who assessed CEOs)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor loading</th>
<th>Item Correlation with the full measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. He/she instills pride in others for being associated with him/her.</td>
<td>.69</td>
<td>.70**</td>
</tr>
<tr>
<td>2. He/she goes beyond self-interest for the good of the group.</td>
<td>.64</td>
<td>.65**</td>
</tr>
<tr>
<td>4. He/she displays a sense of power and confidence.</td>
<td>.54</td>
<td>.55**</td>
</tr>
<tr>
<td>8. He/she emphasizes the importance of having a collective sense of mission.</td>
<td>.80</td>
<td>.80**</td>
</tr>
<tr>
<td>10. He/she talks enthusiastically about what needs to be accomplished.</td>
<td>.78</td>
<td>.77**</td>
</tr>
<tr>
<td>11. He/she articulates a compelling vision of the future.</td>
<td>.75</td>
<td>.75**</td>
</tr>
<tr>
<td><strong>Item average of the full measure</strong></td>
<td><strong>.71</strong></td>
<td><strong>.71</strong></td>
</tr>
</tbody>
</table>
2) For judgmental quality, three authors and subject experts have examined the items in terms of coverage, clarity, and relevance to the example. The original measure of humility has nine items and three dimensions: willingness to know one’s strengths and weaknesses, appreciation of others and openness to improvement. We selected four items and ensured that at least one most representative item was retained for each dimension. For narcissism, we selected four items of the original 14 items that are relevant to CEOs. For socialized charisma, we included items that emphasize the moral aspects and sacrifices for collective good. The items also have a balanced coverage of the dimensions: we selected four items out of eight items for the dimension of idealized influence, and two items out of four items for the dimension of inspirational motivation.

3) For external quality, we compared the correlations between the shortened measures with the full measures as well as the dependent variables of innovative culture and socialized charisma.

The correlations between the full measures and the abbreviated measures were high, supporting convergent validity of the shortened measures: for humility, $r = .90, \ p < .01$; for narcissism, $r = .89, \ p < .01$; for socialized charisma, $r = .98, \ p < .01$.

We then followed Zou (2007) to examine whether the full measures and abbreviated measures differ in their correlations with criteria variables. As shown in Column C, the confidence intervals of the correlation differences all included zero, suggesting that none of the differences was significant. Therefore, the abbreviated measures had similar discriminant, criterion-related validity as compared to the full measures.

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Full measure (Column A)</th>
<th>Abbreviated measure (Column B)</th>
<th>Comparison (Column C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R_{\text{humility,narcissism}}$</td>
<td>-.07</td>
<td>-.33</td>
<td>.18</td>
</tr>
<tr>
<td>$R_{\text{humility,charisma}}$</td>
<td>.36</td>
<td>.12</td>
<td>.59</td>
</tr>
<tr>
<td>$R_{\text{humility,innovation}}$</td>
<td>.22</td>
<td>-.03</td>
<td>.47</td>
</tr>
<tr>
<td>$R_{\text{narcissism,charisma}}$</td>
<td>.18</td>
<td>-.07</td>
<td>.44</td>
</tr>
<tr>
<td>$R_{\text{narcissism,innovation}}$</td>
<td>-.01</td>
<td>.26</td>
<td>.25</td>
</tr>
<tr>
<td>$R_{\text{charisma,innovation}}$</td>
<td>.34</td>
<td>.10</td>
<td>.58</td>
</tr>
</tbody>
</table>

4) For reliability, as compared with full measures, the shortened measures showed lower reliability in Study 1 but acceptable reliability in Study 2.