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# The differential effects of CEO narcissism and hubris on corporate social responsibility

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## **The differential effects of CEO narcissism and hubris on corporate social responsibility**

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### Abstract

While prior studies have predominantly shown that CEO narcissism and hubris exhibit similar effects on various strategic decisions and outcomes, this study aims to explore the mechanisms underlying how narcissistic vs. hubristic CEOs affect their firms differently. Specifically, we investigate how peer influence moderates the CEO narcissism/hubris – CSR relationships. With a sample of S&P 1500 firms for 2003–2010, we find that the positive relationship between CEO narcissism and CSR is strengthened (weakened) when board-interlocked peer firms invest less (more) intensively in CSR than a CEO's own firm; the negative relationship between CEO hubris and CSR is strengthened when peer firms are engaged in less CSR than a CEO's own firm.

### Keywords

board-interlocked peer firms, CEO narcissism, CEO hubris, corporate social responsibility (CSR), S&P 1500 index firms

## 1 INTRODUCTION

Research on upper echelons theory has been paying increasing attention to CEO narcissism and CEO hubris as part of an ongoing effort to shed light on executive decision-making processes (e.g., Chatterjee & Hambrick, 2007, 2011; Hayward & Hambrick, 1997; Resick, Whitman, Weingarden, & Hiller, 2009). This stream of research has shown that, in general, CEO narcissism and CEO hubris influence firm strategic choices and outcomes in similar ways. For instance, both narcissistic CEOs and hubristic CEOs have a penchant for engaging in risky initiatives (Li & Tang, 2010), large-scale acquisitions (Chatterjee & Hambrick, 2007; Malmendier & Tate, 2008; Roll, 1986), intensive research and development (R&D) (Hirshleifer, Low, & Teoh, 2012), and firm innovation (Galasso & Simcoe, 2011; Gerstner, Konig, Enders, & Hambrick, 2013).

Yet, recent empirical efforts have started documenting their opposing effects. For example, while Petrenko, Aime, Ridge, and Hill (2016) found a positive effect of CEO narcissism on a firm's engagement in corporate social responsibility (CSR), Tang, Qian, Chen, and Shen (2015) reported a negative effect of CEO hubris on CSR. These seemingly contradictory findings call for an examination of the differential operating mechanisms of CEO narcissism versus hubris at the macro-organizational level. This study investigates the distinct operating mechanisms of CEO narcissism and hubris leading to their differential effects in the CSR context by studying the moderating effect of peer influence. Specifically, we examine how the CSR activities of board-interlocked peer firms affect the CSR decisions of narcissistic and hubristic CEOs differently, through which we are able to explore their individual operating mechanisms. Our efforts are worthwhile because, although CEO narcissism and CEO hubris are two related executive psychological biases (Hiller & Hambrick, 2005), we know little about how and when they differ in their influence on strategic decisions at the firm level.

This study begins by arguing the key difference between narcissistic CEOs and hubristic CEOs is that narcissistic CEOs need constant applause and attention—what Kernberg (1975) called “narcissistic supply”—to affirm their inflated positive self-view, whereas hubristic CEOs do not (Kernberg, 1975; Li & Tang, 2010). Unlike other strategic decisions such as mergers and acquisitions (M&As) or R&D, which are more economic-oriented, CSR comprises both economic and social aspects. This dual nature of CSR thus allows us to tease out the different ways in which CEO narcissism versus CEO hubris affect firm decisions on CSR engagement.

While the economic benefits of CSR for firms usually take time to materialize and are highly uncertain in many circumstances (Margolis, Elfenbein, & Walsh, 2009), the benefits for executives tend to be more straightforward because CSR is usually perceived as socially desirable by diverse stakeholders (Freeman, 1984; Masulis & Reza, 2015). In fact, CEOs can create a favorable public image for

themselves and elevate their social status in the corporate elite community by engaging in CSR (Hayward, Rindova, & Pollock, 2004). Because of their strong need for continuous social attention to affirm their positive self-view, narcissistic CEOs would initiate more CSR activities (Petrenko et al., 2016); in contrast, hubristic CEOs tend to downplay their resource dependence on stakeholders, and thus, would engage in less CSR activities (Tang et al., 2015).

More importantly, to corroborate the operating mechanisms, we highlight how the CEO narcissism/hubris-CSR relationships can be differentially moderated by the CSR activities of board-interlocked peer firms. The activities of interlocked firms provide a CEO with two types of informational cues. On one hand, if interlocked peer firms have a stellar CSR record, it would be difficult for the CEO to stand out by investing further in CSR activities. On the other hand, the CEO can assess his or her own CSR decision based on peer firms' CSR record and learn from that.

Narcissistic CEOs would use CSR to fuel their positive self-image (Kernberg, 1975; Petrenko et al., 2016). But if peer firms engage in more (less) CSR activities than their own firms do, the CSR activities of their own firms would be less (more) valuable for boosting their self-image. Thus, narcissistic CEOs would be more likely to channel resources out of (into) CSR initiatives in an attempt to set themselves apart and gain social attention. Therefore, we propose that the positive relationship between CEO narcissism and CSR would weaken (strengthen) as the number of peer firms with a more (less) impressive record of CSR than the CEO's own firm increases. In contrast, for hubristic individuals, such a peer influence may play a different role. Hubristic CEOs would likely embrace social information that is consistent with their own beliefs, while rejecting inconsistent social information (Korsgaard, Meglino, & Lester, 1997). Therefore, we predict that the negative relationship between CEO hubris and CSR would strengthen as the number of interlocked peer firms with a poorer CSR record than the firm itself increases; in contrast, even if peer firms are engaged in more CSR activities than their own firms, hubristic CEOs would overlook this fact and the CEO hubris-CSR relationship would remain unchanged. We test these hypotheses with a sample of Standard & Poor's (S&P) 1500 firms during the 2003–2010 period.

This study contributes to the upper echelons theory and the research on executive biases in particular by exploring the differential operating mechanisms of CEO narcissism versus hubris at the macro-organizational level in the context of CSR. Existing research has made scant efforts to compare the influences of the two prominent executive biases on firm behavior. The heightened interest in the role of executive biases in firm strategies and performance has created a need for a better understanding of how and why CEO narcissism and hubris may influence important firm decisions differently. This study aims to fill this void in the literature.

## 2 THEORY AND HYPOTHESES

### 2.1 How CEO narcissism and hubris influence CSR

The recent developments in upper echelons research view narcissism and hubris as among the most important psychological biases of individual CEOs (Hiller & Hambrick, 2005). Narcissists have an inflated positive self-view that requires constant affirmation from others (Campbell, 1999; Raskin & Terry, 1988). Therefore, narcissists seek to be the center of attention. In contrast, hubris describes an individual's exaggerated self-confidence or pride as a result of both contextual stimuli and dispositional traits (Hayward & Hambrick, 1997). Hubris leads to "the overestimation of one's actual ability, performance, level of control, or chance of success" (Moore & Healy, 2008, p. 502). Hubristic CEOs would therefore overrate their own problem-solving abilities, while failing to appreciate and support the initiatives of others (Campbell, Goodie, & Foster, 2004).

Because CEO narcissism and CEO hubris share a common theme of overly positive self-assessment (Hiller & Hambrick, 2005), the extant literature has often theorized them as closely correlated constructs. This dominant rhetoric is also reinforced by studies showing that the two executive psychological biases affect firm behavior in similar ways. For example, Hayward and Hambrick (1997), Chatterjee and Hambrick (2007), and Malmendier and Tate (2008) have shown that firms led by either narcissistic or hubristic CEOs engage more actively in acquisitions than other firms; Li and Tang (2010) and Gerstner et al. (2013) have demonstrated that both CEO narcissism and CEO hubris can lead to greater managerial risk-taking. In addition, firms innovate more intensively under the leadership of either hubristic or narcissistic CEOs (e.g., Galasso & Simcoe, 2011; Gerstner et al., 2013; Hirshleifer et al., 2012). Yet, evidence on the opposite effects of CEO narcissism and CEO hubris on CSR has recently surfaced (Petrenko et al., 2016; Tang et al., 2015). This new development calls for a deeper understanding of how and why these two managerial biases have divergent effects on firm behavior, especially CSR decisions. This is important both theoretically and practically, as the field has always been interested in how CEO personality-related constructs predict firm behavior, yet prior empirical studies have almost exclusively focused on either narcissism or hubris but not the two together.

In fact, the personality psychology literature considers narcissism and hubris as two distinct psychological orientations. One key trait of narcissists is their strong need for social attention and applause—a trait not shared by hubristic individuals (Buss & Chiodo, 1991; Chatterjee & Hambrick, 2011; Kohut & Wolf, 1986). Cognitive psychologists have found that narcissists need to have their superiority reaffirmed constantly (Kernberg, 1975). In contrast, hubristic individuals are not so concerned about what others think of them because they are overly confident about their own abilities (Campbell et al., 2004; Galasso & Simcoe, 2011).

Unlike other empirical contexts such as M&As, innovation, and risk-taking, CSR has a dual nature that captures both economic instrumentality and social desirability (McWilliams, Siegel, & Wright, 2006). On one hand, a good track record of CSR enhances a firm's appeal and increases stakeholder support, which can be beneficial to the firm's performance in the long run (Freeman, 1984). On the other hand, CSR is by itself socially desirable and managers who promote CSR activities are favorably regarded. Thus, debates exist on whether CSR activities actually benefit firms or their managers (Friedman, 1970; Levitt, 1958; Masulis & Reza, 2015). By studying these economic and social aspects of CSR, we can disentangle the operating mechanisms of CEO narcissism and CEO hubris at the firm level.

Specifically, narcissistic CEOs are always looking for reaffirmation of their superiority from others. They derive their "narcissistic supply" from personal exhibition (Bogart, Benotsch, & Pavlovic, 2004), or from the attention and adulation of others around them (Wallace & Baumeister, 2002). Because narcissistic CEOs are constantly looking for opportunities to attract attention, admiration, and applause, sooner or later, they would turn to CSR initiatives to satisfy their needs.

CSR activities are value-loaded initiatives that offer plenty of opportunities for CEOs to meet their strong need for affirming their positive social image. First, CSR is perceived by diverse stakeholders to be socially desirable (Freeman, 1984; Masulis & Reza, 2015). For example, over 1,250 institutional investors world-wide have agreed to support the United Nation (UN)'s "Principles of Responsible Investment" (PRI) project, which encourages responsible investing based on environmental and social performance (Cahan, Chen, Chen, & Nguyen, 2015). In a 2010 UN survey, 93% of CEOs expressed that CSR was "important" or "very important" to the future success of their firms (Cheng, Ioannou, & Serafeim, 2013).

Second, CSR also attracts positive media attention. According to Mullainathan and Shleifer (2005)'s demand-side model of media reporting, the media caters to their viewers' beliefs. Surveys consistently show that the public prefers firms that are good corporate citizens and wants them to succeed (Cone, 2013; Epstein-Reeves, 2010; Grant Thornton, 2011). For example, Epstein-Reeves (2010) showed that 88% of consumers surveyed felt that firms should try to achieve their business goals while improving society and the environment. Consistent with this notion, Cahan et al. (2015) showed the media provides a more favorable coverage of firms with good CSR performance. Indeed, El Ghouli, Guedhami, Kwok, and Mishra (2011) suggested that "the media are more inclined to spend time analyzing and reporting news about 'good' [CSR] firms." Therefore, firms with good CSR performance are perceived more favorably by stakeholders and attract more (especially positive) media coverage.

Moreover, there is a strong human tendency to attribute a firm's behavior and outcomes to its executives, especially the CEO (Chen & Meindl, 1991). Psychologists often refer to this particular tendency as the

“fundamental attribution error” (Weber, Camerer, Rottenstreich, & Knez, 2001, p. 583). For example, Hayward et al. (2004) suggested that journalists often attributed the strategic actions and performance of a firm to its CEO. Following this line of reasoning, CEOs can gain social desirability from their firms’ improved social image by promoting CSR. Indeed, Steve Milloy, Managing Partner of the investment group Action Fund Management, also felt that CEOs could benefit personally from the firm’s CSR investments when he was quoted as saying that “[CEOs] view this [CSR] as positive PR. A lot of them even benefit personally from this. If CEO of XYZ company gives shareholders’ money away, then who gets the honor? The company? No, the CEO” (Weiss, Kirdahy, & Kneale, 2008). Consistent with this argument, Petrenko et al. (2016) found that narcissistic CEOs are more likely to initiate CSR activities as such activities attract a steady stream of applause to boost their “narcissistic supply.”

Hubristic CEOs, in contrast, perceive a significantly reduced need for stakeholder support (Godfrey, 2005), as such, CEOs trust in their own capabilities (Li & Tang, 2010), overestimate their resource endowments (Malmendier & Tate, 2005), and believe that their fate is entirely in their own hands (Miller, 1983; Rotter, 1966). And because the economic benefits of CSR take time to materialize, their beliefs are enforced. As Tang et al. (2015) demonstrated, by underestimating the amount of resources required from stakeholders for their firms’ survival and development, hubristic CEOs are less motivated to respond to stakeholder demands than they probably should, and consequently, engage in less CSR.

In sum, with the dual economic and social nature of CSR initiatives, the underlying differences between CEO narcissism and hubris explain the seemingly contradictory relationships documented by Petrenko et al. (2016) and Tang et al. (2015). To advance our research, in what follows, we explore the differential mechanisms of CEO narcissism and CEO hubris by examining how peer influence, specifically the CSR activities of peer firms, moderates the CEO narcissism/hubris-CSR relationships differently.

## 2.2 The moderating effect of peer influence

Firms and CEOs are socially embedded such that any strategic decisions that they make will influence, and in turn, be influenced by their social relationships and networks (Westphal & Zajac, 2013). Peer firms associated through board interlocks are important sources of such an influence (Davis, 1991; Useem, 1984). Board interlock ties serve as one of the most consequential conduits because they represent an efficient means of exchanging social information among a group of executives who make important corporate decisions (Davis & Greve, 1997). The existing research on board interlock ties shows that social linkages among CEOs through joint board participation generate prominent information exchange and facilitate learning with important impacts on strategic decisions (Beckman & Haunschild, 2002; Rao, Davis, & Ward, 2000). Since CSR is part of a peer firm’s strategic decision and

social performance, it should capture other CEOs' attention. Anecdotal evidence indeed suggests that CSR-related information are transmitted through board interlocks. For instance, Jørgen Vig Knudstorp, the Executive Chairman and former CEO of the LEGO Brand Group and a board member of Starbucks, has noted and commended Starbucks' CSR efforts: "I find Starbucks truly fascinating and inspiring because of its high quality products and customer experiences, the authenticity of the brand, the company's caring approach to consumers and employees and not least the ambitious responsibility agenda" (Starbucks, 2017).

This peer influence can manifest in two ways. On one hand, CEOs can directly observe their peers' activities before deciding whether or not to follow suit. The more peer firms engage in a particular activity, the less unique that activity is. On the other hand, the activities of peers provide social feedback that confirms/disconfirms the CEOs' ex ante beliefs. The informational cues from the CSR activities of peer firms can importantly affect a CEO's belief about the need for CSR engagement. However, due to the differential mechanisms underlying the CEO narcissism/hubris—CSR relationships, we expect that the influence of board-interlocked peer firms works in distinctive ways for narcissistic CEOs and hubristic CEOs.

Recall that narcissistic CEOs are constantly seeking social attention (Buss & Chiodo, 1991; Kohut & Wolf, 1986). They chase the limelight, perceiving the world as a stage and always wanting to play the role of the protagonist (Bogart et al., 2004; Morf & Rhodewalt, 2001). Accordingly, narcissistic CEOs would try hard to set themselves apart from their peers. As far as they are concerned, engaging in CSR activities would not bring them the social attention they desire if many of their peers are already doing the same. In other words, the marginal return of continuously investing in CSR is decreasing for narcissistic CEOs. Such CEOs may choose instead to channel their resources and attention to other business initiatives that would actually generate social attention for them. Hence, they are less likely to follow in their peers' footsteps to invest heavily in CSR. Therefore, when the number of board-interlocked peer firms pursuing more (less) CSR initiatives increases, narcissistic CEOs' firms would opt for the opposite strategy and participate in less (more) CSR activities. The positive relationship between CEO narcissism and CSR would weaken (strengthen) as the number of board-interlocked peer firms engaged in a greater (smaller) amount of CSR than the firm itself increases.

*Hypothesis 1 (H1) The greater the number of board-interlocked firms having a higher (lower) level of CSR than a CEO's own firm, the weaker (stronger) the positive relationship between CEO narcissism and CSR.*

Hubristic CEOs interpret informational cues from the CSR activities of board-interlocked peers differently than narcissists. Hubristic individuals tend to be overconfident in their own capabilities and judgments (Harrison & Shaffer, 1994; Hilary & Menzly, 2006; Weinstein, 1980) and to possess a strong



sense of self-sufficiency (Hayward & Hambrick, 1997; Tang et al., 2015). Hubristic individuals care less about gaining recognition from others and downplay the importance of others in their success (Li & Tang, 2010; Malmendier & Tate, 2008). Therefore, hubristic individuals tend to be less other-oriented (i.e., less concerned about others' views). Social psychology research has shown that individuals with low other-orientation interpret social information in light of its implications for themselves (Meglino & Korsgaard, 2004). The fact that peer firms are engaged in less CSR than their own firms would reinforce hubristic CEOs' beliefs about how little they actually need stakeholders and motivate them to further reduce the CSR activities of their own firms.

On the one hand, prior research has suggested that CEO hubris is subjected to both contextual stimuli and internal disposition (Hayward & Hambrick, 1997). In this regard, even hubristic CEOs may rely on social feedback from others to adjust their own decisions (Chen, Crossland, & Luo, 2015; Li & Tang, 2013). Board interlocks provide the locus for social learning processes as jointly participating directors can debate the merits of particular practices. During this social learning process, participants develop shared beliefs about the appropriate course of action (Bandura, 1977; Kraatz, 1998). Peers' CSR actions thus provide salient and relevant cues that may influence a hubristic CEO's belief about CSR engagement.

On the other hand, since hubristic CEOs who believe in their superiority and self-sufficiency are less other-oriented, they are more likely to screen, process, and interpret social information in a way that benefits them (Korsgaard et al., 1997; Meglino & Korsgaard, 2004). Individuals with low other-orientation would discount information and feedback that do not support their own views while accepting those that are consistent with their own beliefs (Kluger & DeNisi, 1996; Korsgaard, 1996; Stone-Romero & Stone, 2002). For these individuals, learning and behavioral change (or the lack thereof) become a self-fulfilling process, as they selectively pay attention and give weight to different types of information. Therefore, social feedback that is consistent with the prior beliefs of hubristic CEOs reinforces their decisions; in contrast, inconsistent social feedback is usually ignored. In this regard, if board-interlocked peer firms are engaged in fewer CSR activities than a hubristic CEO's own firm, confirming his or her belief that engaging in CSR activities has little value, the negative relationship between CEO hubris and CSR would become stronger (i.e., even more negative). However, when peer firms are engaged in more CSR activities, contradicting the hubristic CEO's belief, he or she would selectively ignore this piece of social information. Thus, the negative relationship between CEO hubris and CSR would not be affected.<sup>1</sup> In sum, we hypothesize:

*Hypothesis 2 (H2) The greater the number of board-interlocked firms having a lower level of CSR than a CEO's own firm, the stronger the negative relationship between CEO hubris and CSR.*

## 3 METHODS

### 3.1 Sample and data

We tested our hypotheses on a sample of U.S. publicly listed firms from the S&P 1500 index. We began with a list of CEOs derived from the Execucomp database and merged the data from various sources. Data on the CSR measure were obtained from the Kinder, Lydenberg, Domini & Co., Inc. (KLD) database. We followed Chatterjee and Hambrick (2007, 2011) to collect data on CEOs' narcissistic tendencies.<sup>2</sup> We followed Tang et al. (2015) to construct a media-based measure of CEO hubris. Firm- and board-related data were collected from Compustat and BoardEx databases. After dropping observations for which complete data were not available, we were left with 266 unique CEOs from 235 firms in our final sample, which yielded 769 firm-year observations for the period from 2003 to 2010.

### 3.2 Measures

#### 3.2.1 Dependent variable

We computed an aggregate measure of *CSR* based on seven dimensions from the KLD data: community relations, corporate governance, diversity, employee relations, the environment, human rights, and product quality (Barnett & Salomon, 2012). Within each dimension are individual items related to CSR strengths and concerns. We derived a net score for each dimension by taking the difference between the total number of strengths and concerns. To allow for comparability across dimensions, we standardized each dimension by deriving their *z*-scores. We then summed the *z*-scores across all the CSR dimensions to create an equally weighted index that captures the firm's net CSR activities. The approach of using net CSR scores has been widely adopted in prior research and is consistent with the notion that top executives pay attention to both the company's CSR strengths and weaknesses when managing stakeholder relations (Chin, Hambrick, & Treviño, 2013).

#### 3.2.2 Independent and moderating variables

Chatterjee and Hambrick (2007, 2011) developed a composite measure of CEO narcissistic tendencies using a set of unobtrusive indicators extracted from archival data. This unobtrusive approach has been validated and adopted by recent studies (e.g., Gerstner et al., 2013; Patel & Cooper, 2014). We followed the same approach and constructed the CEO narcissism measure using a four-item index: (a) the prominence of the CEO's photograph in annual reports, (b) the CEO's prominence in the company's press releases, (c) the cash as well as (d) the non-cash compensation of the CEO relative to those of the other top executives at the same company. We took the two-year moving average of each narcissism indicator (excluding observations pertaining to the first year of the CEO's tenure to avoid issues related to succession) and computed the CEO narcissism measure by taking the mean of each indicator after standardization (Zhu & Chen, 2015).

We followed Tang et al. (2015) and chose a media-based measure of CEO hubris that was first suggested by Malmendier and Tate (2008) and later adopted by other studies (e.g., Chen et al., 2015; Hirshleifer et al., 2012).<sup>3</sup> First, we collected news articles that mentioned the CEOs in our sampled firms from major news sources such as *The Wall Street Journal*, *The New York Times*, *Business Week*, *The Economist*, and *The Financial Times*. For each CEO, we counted the number of terms that suggested confidence (e.g., *confident*, *confidence*, *optimistic*, or *optimism*) as well as the number of terms that implied conservatism (e.g., *reliable*, *cautious*, *conservative*, *practical*, *frugal*, *steady*, *not confident*, or *not optimistic*) (Malmendier & Tate, 2008). We included counts of these terms only if they appeared within 10 words before or after the CEO's name was mentioned. Finally, we computed the *CEO hubris* measure by subtracting the count of *conservatism* terms from the count of *confidence* terms, and scaling the difference by the sum of the two counts for each CEO in each time period.

To measure interlocked peers' CSR engagement, we identified the list of interlocked firms in which a focal firm's CEO or directors held a board position in each firm-year. Data on interlocked firms were obtained from the BoardEx database. For each interlocked firm, we collected data on its CSR score and compared the score to that of the focal firm. From the list of interlocked firms, we counted the number of *Interlocked peer firms having a higher CSR score* as well as the number of *Interlocked peer firms having a lower CSR score* than the focal firm.

### 3.2.3 Control variables

*Prior CSR* was included to control for the firm's CSR level in the previous year.<sup>4</sup> We controlled for the prior *Firm performance* as captured by the firm's return on assets (*ROA*) as well as *Market-to-book* value. *Firm age* was measured as the count of years since the focal firm was first recorded in the CRSP database. *Firm risk* was operationalized as the firm's ratio of long-term debt to equity. We controlled for *Unabsorbed slack*, measured as the ratio of current assets to current liabilities. *Board interlocks* was measured by the number of other firms with which the focal firm shared a common director. We controlled for *R&D intensity*, *Marketing intensity*, *Capital intensity*, and *Number of acquisitions*, which affect the CEO's subsequent decision to engage in CSR investments. *R&D intensity* is measured as the R&D expenses divided by total sales. *Marketing intensity* is measured as the advertising expenses divided by total sales. *Capital intensity* is measured as capital expenses divided by total sales. *Number of acquisitions* is measured as the count of acquisitions made in the prior year.

We controlled for a set of CEO characteristics. *CEO gender* was coded 1 if a CEO was male and 0 otherwise. *CEO tenure* was coded as the number of years since the CEO first assumed the position. *CEO ownership* was computed as the percentage of firm shares owned by the CEO. Since our measure of CEO hubris was derived from media reports, we controlled for the *Count of news articles* that reported on the

CEO in a particular year. We controlled for CEO incentives, which includes *Short-term pay focus* measured as the ratio of the dollar value of bonuses to the total value of all CEO compensation as well as *Long-term pay focus* measured as the ratio of the dollar value of restricted stock and stock options to the total compensation (Deckop, Merriman, & Gupta, 2006). We included the measure of *CEO liberalism* in order to control for CEO preferences about CSR (Chin et al., 2013). To measure *CEO liberalism*, we examined political donations made by the CEO over the prior 10-year period. We obtained the data from the Center for Responsive Politics ([www.opensecrets.org](http://www.opensecrets.org)), which reports data provided by the Federal Election Commission. Following Chin et al. (2013), we created four indicators of liberalism: (a) the number of donations to Democrats divided by the total number of donations (like Chin et al., 2013, we added 0.1 to all numerators and 0.2 to all denominators to handle zero values); (b) the dollar amount of donations to Democrats divided by the dollar value of all donations; (c) the number of years for which the CEO made donations to Democrats divided by the number of years for which the CEO donated to either party; and (d) the number of unique Democratic recipients divided by the total number of recipients. We included contributions to individual candidates, party committees, and political action committees (PACs) that were identified as either Democratic or Republican, and excluded any PACs whose orientation was unclear. The aggregate liberalism score was the average of the four indicators.

#### 3.2.4 Endogeneity control

We controlled for the possibility that narcissistic CEOs might choose specifically to work for firms exhibiting certain characteristics. Following prior research (Chatterjee & Hambrick, 2007; Petrenko et al., 2016), we first regressed CEO narcissism at time  $t$  against a set of antecedent and contemporaneous variables measured in the previous year, that is, year  $t - 1$ . They included the log of firm assets, firm age, and ROA. To also account for the possibility that prior improvements in firm performance might drive narcissistic tendencies, we included the change in ROA (Chatterjee & Hambrick, 2007). We included other variables related to CEO power (duality, CEO ownership, tenure, and board independence) and a dummy for whether CEO was an insider or outsider. To account for the possibility that narcissistic CEOs might choose specifically to work in certain industries, we also included the two-digit SIC code as dummy variables. We then generated a predicted narcissism score and included it as *Endogeneity control* in our models.

#### 3.3 Model specification

Because our data comprise a panel of observations that were repeated for each CEO/firm, we tested our hypotheses using a firm fixed-effect model to control for any unobserved stable firm differences. We also calculated the robust standard errors clustered at the CEO level. We generated interaction terms between the CEO narcissism/hubris variables and the count of interlocked peer firms that were performing more or less CSR.

## 4 RESULTS

Table 1 presents the descriptive statistics and correlations among the variables. Table 2 presents the effects of CEO narcissism and CEO hubris on the firm's subsequent CSR efforts. Model 1 is the baseline model that includes only the control variables, while Models 2–8 include our explanatory variables. The increasing values of adjusted  $R$ -squared and significant Wald tests for Models 2–8 together suggest that adding our explanatory variables improve the model fit over the baseline Model 1. In Models 2 and 4, the coefficient estimates for CEO narcissism are positive and significant (Model 2,  $\beta = 0.119$ ,  $p = .049$ ; Model 4,  $\beta = 0.112$ ,  $p = .057$ ). In Models 3 and 4, the coefficients for CEO hubris are negative and significant (Model 3,  $\beta = -0.200$ ,  $p = .004$ ; Model 4,  $\beta = -0.194$ ,  $p = .004$ ). These results replicate the findings in previous research (Petrenko et al., 2016; Tang et al., 2015).

Table 1. Descriptive statistics and correlations

Variables	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	
(1) CSR, $t + 1$	0.00	0.86																									
(2) Prior CSR, $t$	-0.08	0.79	0.88																								
(3) CEO narcissism	-0.01	0.58	-0.12	-0.13																							
(4) CEO hubris	0.34	0.64	-0.14	-0.14	0.11																						
(5) Count of news articles	6.07	14.36	0.08	0.07	-0.02	-0.00																					
(6) Board interlocks	11.99	6.18	0.02	0.04	0.14	0.01	0.11																				
(7) Interlocking peers with lower CSR	4.12	3.92	0.52	0.62	0.03	-0.14	0.09	0.53																			
(8) Interlocking peers with higher CSR	3.89	3.73	-0.57	-0.66	0.14	0.12	0.06	0.45	-0.30																		
(9) CEO tenure	8.12	5.98	-0.01	-0.01	-0.00	-0.00	0.02	-0.24	-0.15	-0.16																	
(10) CEO gender	0.96	0.19	-0.11	-0.07	0.03	-0.05	0.04	-0.08	-0.05	0.05	0.11																
(11) CEO ownership	0.02	0.05	0.01	0.02	-0.17	0.05	-0.01	-0.18	-0.11	-0.15	0.28	0.06															
(12) CEO liberalism	0.46	0.17	-0.06	-0.08	-0.02	0.08	0.08	-0.09	-0.12	0.02	0.07	0.02	0.05														
(13) Short-term pay focus	0.12	0.17	-0.09	-0.02	-0.03	-0.01	0.14	0.01	-0.04	0.01	0.06	0.07	0.04	0.08													
(14) Long-term pay focus	0.34	0.50	0.01	-0.04	0.02	-0.01	-0.01	0.01	-0.03	0.05	0.02	-0.04	-0.03	0.00	-0.32												
(15) Number of acquisitions	1.95	2.92	0.01	0.04	-0.11	-0.02	0.32	0.08	0.11	0.04	-0.09	0.06	-0.04	0.01	0.12	0.01											
(16) Marketing intensity	0.01	0.02	0.21	0.21	-0.03	0.02	0.08	0.11	0.18	-0.01	-0.10	-0.04	0.09	0.08	0.07	-0.04	0.02										
(17) R&D intensity	0.05	0.12	0.15	0.17	-0.03	-0.02	0.03	-0.04	0.02	-0.14	0.05	0.07	-0.08	0.03	-0.08	-0.02	0.02	-0.02									
(18) Capital intensity	0.07	0.11	-0.01	-0.02	-0.10	0.03	-0.05	-0.10	-0.06	-0.05	0.11	0.06	0.04	-0.10	-0.07	0.01	-0.08	0.05	0.08								
(19) Unabsorbed slack	0.42	0.89	0.18	0.18	-0.29	-0.08	0.06	-0.15	-0.04	-0.18	0.06	0.05	0.01	0.03	0.02	-0.08	0.13	0.03	0.30	0.02							
(20) ROA	0.06	0.08	0.14	0.15	-0.03	-0.11	0.04	0.06	0.16	-0.02	-0.10	-0.03	0.04	-0.05	0.02	0.07	0.15	0.18	-0.14	-0.01	0.09						
(21) Firm size	9.46	1.56	-0.13	-0.16	0.00	0.05	0.23	0.47	0.26	0.41	-0.24	0.03	-0.18	-0.03	0.05	0.06	0.29	0.00	-0.18	-0.00	-0.22	0.04					
(22) Firm risk	0.85	1.33	-0.09	-0.10	-0.09	0.03	-0.02	0.08	0.01	0.11	-0.01	-0.00	-0.03	0.08	-0.03	0.03	-0.02	-0.13	-0.07	-0.02	-0.20	-0.36	0.15				
(23) Firm age	34.58	23.68	-0.08	-0.09	0.20	-0.10	0.01	0.33	0.19	0.30	-0.26	-0.08	-0.12	-0.07	-0.02	0.06	0.03	0.11	-0.11	-0.04	-0.21	0.14	0.36	-0.00			
(24) Market-to-book value	2.06	1.26	0.21	0.22	-0.12	-0.07	0.06	-0.08	0.08	-0.18	-0.04	0.01	0.05	0.05	0.03	-0.12	0.13	0.27	0.30	0.01	0.51	0.44	-0.27	-0.26	-0.10		
(25) Endogeneity control	0.02	0.28	-0.18	-0.21	0.48	0.03	-0.17	0.14	0.03	0.17	-0.04	-0.08	-0.30	-0.01	-0.06	0.07	-0.11	-0.07	0.04	-0.02	-0.13	-0.10	0.02	-0.02	0.32	-0.14	

Note.  $n = 769$ . Correlations with magnitude greater than 0.07 are significant at  $p < .05$ .

Table 2. Effects of CEO narcissism and hubris on CSR

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Prior CSR	0.404 (.000)	0.397 (.000)	0.400 (.000)	0.394 (.000)	0.470 (.000)	0.469 (.000)	0.473 (.000)	0.472 (.000)
ROA	0.884 (.019)	0.896 (.019)	0.889 (.016)	0.900 (.017)	0.879 (.019)	0.943 (.012)	0.876 (.019)	0.933 (.013)
Firm size	0.067 (.474)	0.069 (.455)	0.036 (.697)	0.039 (.671)	0.040 (.667)	0.054 (.555)	0.061 (.513)	0.081 (.381)
Firm risk	0.040 (.032)	0.046 (.013)	0.036 (.050)	0.042 (.023)	0.039 (.034)	0.042 (.041)	0.042 (.027)	0.046 (.030)
Firm age	0.090 (.000)	0.090 (.000)	0.091 (.000)	0.091 (.000)	0.090 (.000)	0.093 (.000)	0.090 (.000)	0.093 (.000)
Market-to-book value	-0.025 (.378)	-0.024 (.396)	-0.026 (.351)	-0.025 (.365)	-0.020 (.476)	-0.018 (.534)	-0.019 (.492)	-0.016 (.566)
Number of acquisitions	0.012 (.207)	0.011 (.230)	0.009 (.350)	0.008 (.374)	0.010 (.254)	0.013 (.120)	0.011 (.218)	0.014 (.093)
Marketing intensity	-9.621 (.064)	-9.594 (.072)	-9.334 (.071)	-9.317 (.079)	-9.333 (.069)	-9.516 (.071)	-9.229 (.056)	-9.334 (.061)
R&D intensity	-0.236 (.159)	-0.239 (.143)	-0.247 (.123)	-0.250 (.107)	-0.266 (.077)	-0.276 (.066)	-0.257 (.088)	-0.259 (.083)
Capital intensity	0.395 (.078)	0.404 (.061)	0.429 (.042)	0.437 (.034)	0.450 (.026)	0.488 (.016)	0.443 (.029)	0.478 (.018)
Unabsorbed slack	-0.020 (.525)	-0.016 (.617)	-0.034 (.295)	-0.030 (.361)	-0.029 (.380)	-0.039 (.273)	-0.026 (.428)	-0.036 (.304)
Board interlocks	0.000 (.936)	-0.000 (.982)	0.002 (.731)	0.001 (.812)	0.002 (.871)	0.005 (.653)	0.003 (.762)	0.007 (.569)
Count of news articles	-0.003 (.275)	-0.003 (.279)	-0.003 (.286)	-0.003 (.292)	-0.004 (.272)	-0.005 (.159)	-0.004 (.284)	-0.006 (.156)
CEO tenure	0.003 (.662)	0.005 (.504)	0.002 (.806)	0.004 (.630)	0.004 (.597)	0.005 (.467)	0.004 (.616)	0.005 (.439)
CEO gender	-0.307 (.104)	-0.326 (.090)	-0.240 (.106)	-0.261 (.087)	-0.251 (.098)	-0.257 (.082)	-0.229 (.077)	-0.228 (.071)
CEO ownership	-0.587 (.745)	-0.722 (.694)	-0.633 (.726)	-0.759 (.680)	-0.698 (.690)	-0.856 (.603)	-0.636 (.714)	-0.841 (.605)
CEO liberalism	-0.137 (.269)	-0.119 (.337)	-0.118 (.336)	-0.102 (.403)	-0.106 (.386)	-0.120 (.336)	-0.121 (.312)	-0.135 (.275)
Short-term pay focus	-0.270 (.029)	-0.263 (.042)	-0.285 (.025)	-0.278 (.036)	-0.298 (.028)	-0.301 (.026)	-0.272 (.038)	-0.270 (.038)
Long-term pay focus	0.003 (.941)	0.002 (.963)	0.004 (.895)	0.004 (.918)	0.001 (.978)	-0.007 (.853)	0.003 (.943)	-0.006 (.886)
CEO narcissism		0.119 (.049)		0.112 (.057)	0.106 (.067)	0.145 (.127)	0.115 (.052)	0.153 (.106)
CEO hubris			-0.200 (.004)	-0.194 (.004)	-0.193 (.003)	-0.198 (.002)	-0.011 (.929)	-0.013 (.917)
Interlocking peers with lower CSR					-0.011 (.550)	-0.019 (.280)	-0.004 (.830)	-0.012 (.478)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Interlocking peers with higher CSR					0.011	0.010	0.020	0.018
					(.521)	(.551)	(.201)	(.265)
CEO narcissism × Interlocking peers with lower CSR (H1)						0.024		0.025
						(.026)		(.017)
CEO narcissism × Interlocking peers with higher CSR (H1)						-0.032		-0.032
						(.005)		(.004)
CEO hubris × Interlocking peers with lower CSR (H2)							-0.019	-0.022
							(.049)	(.016)
CEO hubris × Interlocking peers with higher CSR							-0.019	-0.015
							(.149)	(.251)
Endogeneity control	0.147	0.131	0.140	0.124	0.136	0.145	0.146	0.159
	(.184)	(.233)	(.207)	(.257)	(.213)	(.178)	(.182)	(.145)
Constant	-3.024	-3.017	-2.760	-2.762	-2.771	-2.985	-3.082	-3.360
	(.001)	(.001)	(.002)	(.002)	(.001)	(.001)	(.001)	(.000)
Firm and year fixed effects	Included	Included	Included	Included	Included	Included	Included	Included
Observations	769	769	769	769	769	769	769	769
Adjusted r-squared	0.877	0.878	0.879	0.880	0.880	0.885	0.881	0.885
Wald test	-	3.93	8.46	6.32	4.02	5.08	3.98	4.91
		(.049)	(.004)	(.002)	(.004)	(.000)	(.001)	(.000)

Notes. Exact  $p$ -values reported in parentheses. The Wald test is for the joint null hypothesis that the value of the coefficients of the additional variables, with respect to Model 1, is zero.

To test our Hypotheses 1 and 2, Model 5 adds the variables related to the CSR performance of the board-interlocked peer firms. Models 6 and 7 include the interaction terms of CEO narcissism and CEO hubris with the CSR level of peer firms respectively. Model 8 is the fully specified model. Hypothesis 1 predicts that as the number of peer firms engaged in a relatively higher (lower) level of CSR initiatives increases, narcissistic CEOs are less (more) likely to engage in such initiatives themselves. Models 6 and 8 show that the coefficient estimates for the interaction term between CEO narcissism and the number of peer firms engaged in less CSR activities are positive and significant (Model 6,  $\beta = 0.024$ ,  $p = .026$ ; Model 8,  $\beta = 0.025$ ,  $p = .017$ ). In contrast, the coefficient estimates for the interaction term between CEO narcissism and the number of peers firms engaged in more CSR are negative and significant (Model 6,  $\beta = -0.032$ ,  $p = .005$ ; Model 8,  $\beta = -0.032$ ,  $p = .004$ ). Figures 1 and 2 illustrate the respective interaction effects graphically. These results jointly render support to Hypothesis 1: CEOs with greater narcissistic tendencies adopt CSR strategies that set them apart from their social peers.

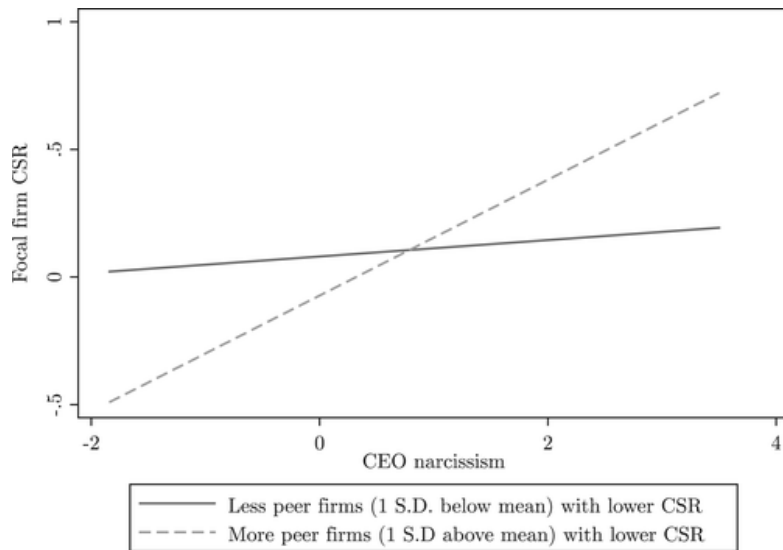


Figure 1 Effect of interaction between CEO narcissism and number of peers with lower CSR on a firm's subsequent CSR

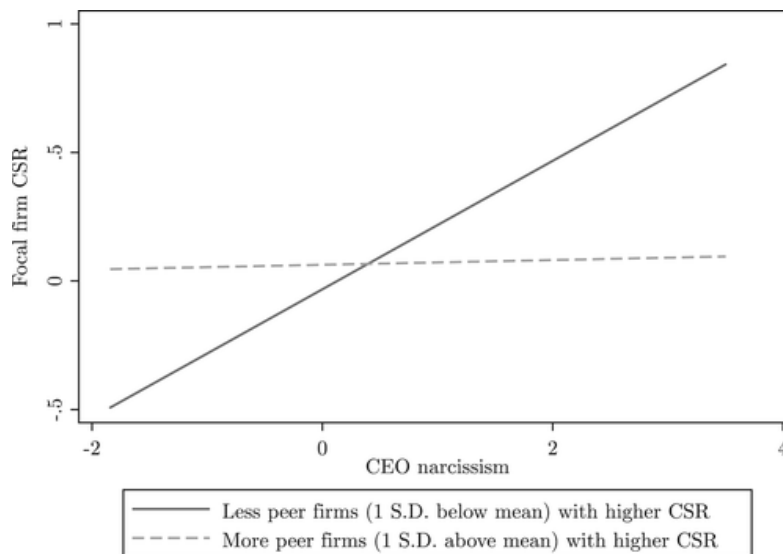


Figure 2 Effect of interaction between CEO narcissism and number of peers with higher CSR on a firm's subsequent CSR

Next, Hypothesis 2 predicts that as the number of peer firms with a relatively lower level of CSR engagement rises, hubristic CEOs are even less likely to increase their CSR activities. In Models 7 and 8, the coefficient estimates for the interaction term between CEO hubris and the number of peers engaged in less CSR are negative and significant (Model 7,  $\beta = -0.019$ ,  $p = .049$ ; Model 8,  $\beta = -0.022$ ,  $p = .016$ ), suggesting that peer firms with lower CSR engagement send a signal reinforcing the hubristic CEO's belief that stakeholder support is nonessential, which further strengthens the negative relationship between CEO hubris and CSR activities. Figure 3 illustrates this interaction effect. The moderating effect of pro-CSR peer firms on the relationship between CEO hubris and CSR is, however, insignificant,



suggesting that hubristic CEOs are less likely influenced by social information that is inconsistent with their beliefs. Overall, our analyses render support to Hypothesis 2.

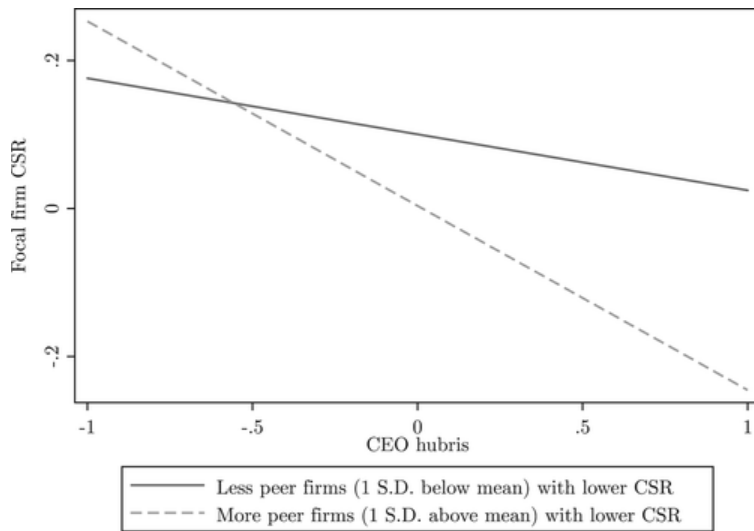


Figure 3 Effect of interaction between CEO hubris and number of peers with lower CSR on a firm’s subsequent CSR

#### 4.1 Additional analyses

To the extent that media attention makes certain CSR activities more salient than others, narcissistic CEOs are more likely to respond to informational cues from peers regarding CSR activities that are more prominently covered by the media.

To explore this idea, we conducted keyword searches in Factiva for articles from four major media outlets (*The Wall Street Journal*, *The New York Times*, *The Economist*, and *The Financial Times*) over the 20-year period from 1995 to 2014. Using the ratings definitions from the KLD STATS manual (RiskMetrics, 2010), we chose several keywords that are relevant to each CSR component (for instance, we used search terms such as *political involvement* and *managerial compensation* for the corporate governance CSR category, and *non-profit*, *volunteer program*, and *community engagement* for the community CSR category). We then searched Factiva for articles containing each keyword in each year. We normalized the number of articles retrieved for each keyword, each year, using the article count in the year 1995 as the initial baseline. This allowed us to track how media coverage increased or decreased (as a percentage of the number of articles retrieved in 1995) over time.

Overall, there was sustained or even increasing media coverage on the community, diversity, employee relations, human rights, and environmental dimensions of CSR, but decreasing coverage on the corporate governance and product quality dimensions. We created a CSR measure (*High\_media\_CSR*) that summed

up the five dimensions of CSR receiving high media coverage in general and another CSR measure (*Low\_media\_CSR*) that summed up the two dimensions of CSR attracting relatively less media attention. If our logic holds, we would find stronger evidence from models predicting *High\_media\_CSR*. We ran the regression as specified in Model 8 for both *High\_media\_CSR* and *Low\_media\_CSR* as separate dependent variables. Our analyses rendered supportive evidence. The coefficient of the interaction between CEO narcissism and interlocked peers with higher CSR engagement is negative and significant ( $\beta = -0.152, p = .030$ ) in the model using the *High\_media\_CSR* measure, but it is insignificant ( $\beta = -0.050, p = .168$ ) in the model using the *Low\_media\_CSR* measure. Similarly, the coefficient of the interaction between CEO hubris and interlocked peers with lower CSR is negative and significant ( $\beta = -0.140, p = .034$ ) in the model using the *High\_media\_CSR* measure but not so in the model using the *Low\_media\_CSR* measure ( $\beta = 0.028, p = .597$ ).

## 5 DISCUSSION

While existing research has identified a similar effect of CEO narcissism and CEO hubris on strategic choices, recent research has found seemingly contradictory results in the form of a positive association between CEO narcissism and CSR (Petrenko et al., 2016), but a negative association between CEO hubris and CSR (Tang et al., 2015). Our study aims to explore the differential effects of narcissism versus hubris in the context of CSR. We examined the different operating mechanisms by studying the moderating effect of the CSR activities of board-interlocked peer firms. Our results support our hypotheses, suggesting that narcissistic CEOs and hubristic CEOs have different considerations when deciding on the level of CSR engagement.

Our study contributes to the upper echelons research on executive psychological orientations by helping clear up some of the confusion surrounding CEO narcissism and CEO hubris. Scholars have known narcissism and hubris to be two distinct executive psychological orientations, but the existing research tends to confound the two (Hiller & Hambrick, 2005). The reasons include the similarity of the mechanisms that drive the two constructs (Chatterjee & Hambrick, 2011; Gerstner et al., 2013; Li & Tang, 2010), the overlapping measurements (Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997), and the omitted variable bias arising from the failure to empirically control for one construct when examining the other (Patel & Cooper, 2014; Zhu & Chen, 2015). We are among the first to simultaneously examine the effects of these two related but essentially different psychological orientations, and explore their operating mechanisms to understand their different implications for certain strategic decisions such as CSR. Our efforts to replicate and extend the existing findings (Petrenko et

al., 2016; Tang et al., 2015) resonate with the growing importance attached to replicability in strategic management research (Bettis, 2012; Hubbard, Vetter, & Little, 1998).

This study also highlights the social influence of board-interlocked peers. Many business practices are diffused through board interlocks. Our research suggests that the diffusion process can be facilitated or hampered by CEO personality (i.e., narcissism/hubris). Future research may link the CEO personality research to the social diffusion literature examining how business practices are imitated, transferred, and diffused across the social structure (Zhu & Chen, 2015).

In addition, the measurements employed in this study can be further improved. As it is difficult to directly assess the psychological characteristics of large firms' CEOs (Hambrick & Mason, 1984), following the convention in upper echelons research, we rely on unobtrusive methods to measure CEO narcissism and hubris (Chatterjee & Hambrick, 2011; Tang et al., 2015). Nevertheless, we also note that there might be some noise associated with these archival-based measures. We encourage future research to employ more direct measures in surveys and experimental studies to confirm and extend our findings.

Future research may wish to improve on our approach to address the potential endogeneity issue in our study. Certain types of CEOs may be attracted to firms with certain characteristics and there might be a matching process between CEOs and firms. To rule out this potential endogeneity issue, we have carefully followed the previous research to conduct an endogeneity check. Yet, we also note that a better research design might be one that exploits a scenario where the sampled CEOs are randomly assigned to the firms. We suspect a quasi-experimental design due to some exogenous shock or regulation change may help to achieve this goal. However, limited data availability does not allow us to do this in the current study. Moreover, because our hypotheses are mainly about the moderating effects, this endogeneity problem may not be a severe issue in this study (cf. Brockner, Siegel, Daly, Tyler, & Martin, 1997; Kotabe, Martin, & Domoto, 2003). Nevertheless, we acknowledge this limitation and call for future research to address this potential endogeneity issue with better research design.

Finally, our results indicate that hubristic CEOs pay attention only to information that is aligned with their mental models and neglect cues that oppose their personal beliefs. Our study provides initial evidence suggesting that not all information available to hubristic CEOs can alter their beliefs. After all, beliefs are hard to change. Future research should also explore the potential role that social information plays in influencing executive bias and the effect of information from other sources such as peer firms in the same industry, firms with comparable compensation practices, or peer firms covered by the same set of analysts.

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## Notes

1 The null hypothesis, which we do not formally propose, is that the number of peer firms with a *higher* level of CSR than a CEO's own firm does *not* have a moderating effect on the relationship between CEO narcissism and CSR.

2 Petrenko et al. (2016) used a videometric approach to measure CEO narcissism, where third-party coders rated the CEO's narcissism after the latter watched videos of other CEOs acquired from the internet. They reported that their videometric measure of CEO narcissism was highly correlated with ( $r = 0.404, p < .001$ ) Chatterjee and Hambrick's (2011) measure.

3 Different measures are based on different assumptions and have different implications (Hill, Kern, & White, 2012). For example, the index measure proposed by Hayward and Hambrick (1997) is based on the *antecedents* of CEO hubris. Given our theory mainly deals with the interrelations between CEOs and external audiences, a media-based reflective measure (Malmendier & Tate, 2008) that captures external audiences' perception of a CEO's level of hubris would be more appropriate. On a separate note, prior research has often used hubris and overconfidence interchangeably.

4 Our results remain similar if we omit the lagged dependent variable. In supplementary analyses, we obtained consistent results if we included the lagged dependent variable using the Arellano-Bond estimation. Results are available on request.

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