

## Repositório ISCTE-IUL

---

**Deposited in *Repositório ISCTE-IUL*:**

2019-05-08

**Deposited version:**

Post-print

**Peer-review status of attached file:**

Peer-reviewed

**Citation for published item:**

Rego, J., Cunha, M. P. & Simpson, A. V. (2018). The perceived impact of leaders' humility on team effectiveness: an empirical study. *Journal of Business Ethics*. 148 (1), 205-218

**Further information on publisher's website:**

10.1007/s10551-015-3008-3

**Publisher's copyright statement:**

This is the peer reviewed version of the following article: Rego, J., Cunha, M. P. & Simpson, A. V. (2018). The perceived impact of leaders' humility on team effectiveness: an empirical study. *Journal of Business Ethics*. 148 (1), 205-218, which has been published in final form at <https://dx.doi.org/10.1007/s10551-015-3008-3>. This article may be used for non-commercial purposes in accordance with the Publisher's Terms and Conditions for self-archiving.

---

### Use policy

Creative Commons CC BY 4.0

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a link is made to the metadata record in the Repository
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

---

**THE PERCEIVED IMPACT OF HUMILITY ON TEAM EFFECTIVENESS: AN  
EMPIRICAL STUDY\***

ARMÉNIO REGO

Universidade de Aveiro, Aveiro (Portugal)

*and*

Business Research Unit (UNIDE-IUL), Instituto Universitário de Lisboa (Portugal)

armenio.rego@ua.pt

MIGUEL PINA E CUNHA

Nova School of Business and Economics, Universidade Nova de Lisboa (Portugal)

mpc@novasbe.pt

ACE VOLKMANN SIMPSON

UTS Business School, University of Technology, Sydney (Australia)

ace.simpson@uts.edu.au

**Abstract**

We assess the perceived impact of leaders' humility (both self and other-reported) on team effectiveness, and how this relationship is mediated by balanced processing of information. Ninety-six leaders (plus 307 subordinates, 96 supervisors, and 656 peers of those leaders) participate in the study. The findings suggest that humility in leaders (as reported by others/peers) is indirectly (i.e., through balanced processing) related to leaders' perceived impact on team effectiveness. The study also corroborates literature pointing out the benefits of using other-reports (rather than self-reports) to measure humility, and suggests including humility into the authentic leadership research agenda.

**Keywords:** balanced processing, leader humility, leader' perceived impact on team effectiveness.

---

\* We are very grateful to both reviewers for their helpful comments and recommendations.

## INTRODUCTION

As a virtue “that concerns human limits”, humility “makes some uncomfortable” (Owens et al., 2012, p. 260), especially within the context of corporate world where competition, profit maximization, and pursuance of competitive advantage prevail as dominant narratives (Hühn 2014). Consequently, humility has been frequently and mistakenly considered a weakness indicating low self-esteem (Ou et al., 2014; Weiss, & Knight, 1980), a personality characteristic incompatible with the tough realities faced by leaders in modern and competitive organizations. Over the last years, however, such negative perspectives of humility have been changing. The significance of humble leadership has attracted more and more interest in recent years, mainly in the wake of corporate scandals attributed to the hubris, narcissism and arrogance of corporate executives (Argandoña 2014; Boje et al. 2004; Hühn 2014; Owens and Hekman 2012). The Economist (2013, p. 59) reasoned that “arrogance breeds mistakes” and that “If leadership has a secret sauce, it may well be humility”. The importance of humility is being increasingly recognized within the leadership context with several scholars claiming that this virtue is critical for leaders' effectiveness (Collins 2001; Ou et al. 2014; Owens and Hekman 2012, 2015; Schrage 2015; Owens et al. 2013, 2015; Weick 2001). Argandoña (2014, p. online) argues that humility “is not just a personal desideratum but a fundamental quality of a good manager and good management”. Outside the corporate world, humility has been recognized and praised as a distinguishing quality in highly respected leaders such as Nelson Mandela (Cascio and Luthans 2014; The Economist 2013b), Abraham Lincoln (Goodwin 2005), and Pope Francis (Vallely 2013; “this air of humility is rapidly winning him authority”, Segreti 2013, p. 10).

Despite calls for greater recognition of the significance of humility to leadership, the study of humility in leadership “is still in its infancy” (Tangney 2009, p. 483). As noted by Owens et al. (2012), most research on humility in leadership is theoretical, indicating the need for more empirical evidence on the outcomes of humble leadership (Owens and Hekman 2012). The current study contributes to the limited empirical literature on humility within leadership by exploring how

leaders' humility relates to their perceived impact on team effectiveness. Also explored as a mediating factor is the leader's balanced processing of information defined as the ability to analyze information objectively and to explore other people's opinions before making decisions (Avolio and Mhatre 2012). While a number of authors have suggested that humility facilitates greater leadership effectiveness (Collins 2001; Morris et al. 2005; Vera and Rodriguez-Lopez 2004), the how and the why of this relationship remains unclear (i.e., through which mechanisms).

We suggest that because humble leaders present greater "openness to new ideas, contradictory information, and advice" (Tangney 2009, p. 73), they adopt more balanced processing of information. Consequently, humble leaders have a wider and richer array of information and knowledge at their disposal, equipping them to make better informed decisions and act as more effective as team players (Fast et al. 2014). It is thereby likely that humble leaders are perceived as having a stronger impact on team effectiveness, with the balanced processing of information acting as one possible underlying mechanism of this process. We adopt a team level analysis, a procedure scarcely seen in empirical studies about humility in leaders (for exceptions, see Owens and Hekman 2015, and Owens et al. 2015; Ou et al. 2014 involves an organizational level), although its pertinence is unquestionable considering the ongoing shift in modern organizations from work organized around individual jobs to team-based work (Kozlowski and Bell 2003).

Before proceeding it is important to note that the study uses empirical data collected within the context of a leadership development program. Included within the program was a 360 degree feedback exercise covering the three factors considered in this paper: leader humility, balanced processing, and perceived impact of leadership on team effectiveness. Despite limitations inherent to the measurement instruments (including their content coverage), we hold that the data collected from different sources (the leaders themselves, their supervisors, their subordinates, and their peers) is worth sharing with scholars interested in studying humility in leadership.

We structure the paper as follows: Initially, we clarify how humility has been defined in the literature, as well as how leader humility is operationalized in this paper. We then discuss why humble leaders are perceived as having stronger impact on team effectiveness and suggest balanced processing as a possible mediator of this relationship. Subsequently, we present our methodology, discuss the main findings and limitations of the study, before presenting the main conclusions.

### **HUMILITY DEFINITIONS, OPERATIONALIZATION, AND MEASUREMENT**

Derived from the Latin *humilitas*, which in turn comes from *humus*, which means “earth”, and *humi*, “on the ground” (Owens and Hekman 2012), humility is described as an essentially stable trait characterized by a self-view that recognizes other people as more significant than oneself. Accordingly, humility involves maintaining a grounded perspective of oneself in relation to others (Owens et al. 2012), facilitating those with humility in recognizing areas of strength and weakness both in themselves and others, and buffering them from developing superiority or inferiority complexes. While these descriptions of humility appear to accurately define the construct, in fact scholarly consensus on a definition of humility and its dimensions remains wanting (Ou et al. 2014).

In the current study we adopt a parsimonious conceptualization of humility as we analyze data collected from a leadership development program which included a proxy of leader humility within the assessment instrument. Humility is therein operationalized as a combination of modesty, the ability to acknowledge one's mistakes, and a relatively low self-focus. Consequently, we adopt a view widely present in the literature, that “a moderate estimate of personal merits or achievement” (Tangney 2009, p. 485) is a component of humility but “does not capture other key aspects of humility such as a ‘forgetting of the self’ and an appreciation of the variety of ways in which others can be worthy” (see also Kachorek et al. 2004; LaBouff et al. 2012). While acknowledging that important features are absent from our operationalization of humility, and that some authors (e.g., Owens et al. 2013) consider humility and modesty as different although related constructs, we

nonetheless converge with other authors (e.g., Davis et al. 2013) by considering our measure a proxy of leader humility. Despite limitations inherent to the measurement instrument, we consider the data collected from four groups of sources (the leaders themselves, their supervisors, subordinates, and peers) to be worthy of consideration in the study of humility in leadership.

Before proceeding, it is important to note that there has been skepticism among scholars concerning the validity of studying humility using self-report measures, due to the self-serving biases of such measures (Owens et al. 2013). While biases of this sort are not the exclusive domain of self-report humility measures (Connelly and Ones 2010; Oh et al. 2011; Paulhus and Reid 1991), literature nonetheless suggests that other-report measures may provide more valid assessments. Tangney (2009) has argued that humility appears particularly unique as a personality construct that cannot be assessed via self-report methodologies. As an interpersonal quality, however, humility lends itself well to other-report as an alternative to self-report research approaches. Consequently, we include different types of raters, comparing self-reported humility with subordinate-reported, supervisor-reported, and peer-reported humility.

## LITERATURE AND HYPOTHESES

### **Perceived impact of leaders' humility on team effectiveness**

A growing number of scholars have argued that leader humility is important to organizational/team effectiveness (Argandoña 2014; Owens and Hekman 2012; Vera and Rodriguez-Lopez 2004; Weick 2001). In the modern organizational context characterized by high complexity and requirements for adaptability (Goddard and Eccles 2013; Weick 2001), a greater emphasis on the bottom-up aspects of leadership is necessary. Leaders who admit they do not have all the answers in a complex and unknowable world are more credible (Weick 2001). A leader who accepts mistakes and failures and embraces the unknown (Mangelsdorf 2015; Schrage 2015), along with maintaining a grounded self-view and perspective of others, while acknowledging the team members' strengths provides many

benefits for team effectiveness. We extrapolate that the benefits of humble leadership on team functioning might include a greater openness to new paradigms and a focus on exploration, a capacity to learn from others, a willingness to recognize personal failings or limitations, a greater likelihood of initiating efforts to learn and correct past mistakes, a willingness to follow advice, greater respect for those with more experience, the mentoring of juniors, and the avoidance of self-complacency (Vera and Rodriguez-Lopez 2004). Overall, these actions may lead to greater team members' satisfaction, affective commitment and engagement, individual and collective efforts in search of continuous adaptation and renewal, better team integration, greater innovation, and enhanced productivity (Ou et al. 2014; Owens and Hekman 2015; Vera and Rodriguez-Lopez 2004). Humble leadership supports innovation as team members feel safer and, in turn, freer to take on risks and experiment with new ideas (Owens and Hekman 2012). Feeling valued and respected by their humble leader, team members, both individually and collectively, develop stronger work engagement and higher collective efficacy. Consequently, they set more challenging team goals and are more persevering in pursuing them (Goncalo et al. 2008; Jung and Sosik 2003). Humble leaders are therefore more likely to face problems head-on rather than "slipping into denial" (Vera and Rodriguez-Lopez 2004, p. 405). Social exchange theory further suggests that humble leaders are better at developing strong social bonds with team members (Davis et al. 2013; LaBouff et al. 2012; Morris et al. 2005; Owens et al. 2013), which the team reciprocates with higher levels of performance and commitment (De Jong and Elfring 2010; Dirks and Ferrin 2002; Dirks and Skarlicki 2004; Leroy et al. 2012; Mishra and Mishra 2012; Podsakoff et al. 2012). It is thus plausible that leaders with greater humility enhance their followers' and teams' performance – effects that are potentially perceived by the team leader's supervisor. Hence:

*Hypothesis 1:* Leaders with more versus less humility are perceived as having a more positive impact on team effectiveness

### **Mediating effects of balanced information processing**

Next, we discuss how balanced processing may explain why humble leaders are perceived as facilitating greater team effectiveness. Balanced processing is a dimension of the authentic leadership construct (Avolio and Mhatre 2012) and represents the degree to which a leader objectively analyzes all relevant data before making decisions. The process of balanced processing involves soliciting views (including those of subordinates and peers) that challenge deeply-held personal beliefs, and processing information that contradicts an initial viewpoint (Avolio and Mhatre 2012). Doing justice to Tangney (2009, p. 485), who identified “openness to new ideas, contradictory information, and advice” as a key feature of humble people, we posit that balanced processing of information may be an expression of a leaders' humility: more versus less humble leaders tend to adopt more versus fewer balanced processing behaviors. A humble leaders' grounded perspective toward themselves and others may lead them to develop open-mindedness (Damon, 2004), admit areas of ignorance, have a stronger desire to learn (Argandoña 2014; Owens et al. 2012; Weick 2001), and recognize that objectively analyzing all relevant data before drawing a conclusion facilitates better decision making (Chancellor and Lyubomirsky 2013; Owens and Hekman 2012; Owens et al. 2013; Tangney 2009; Van Dierendonck 2011). Soliciting views that challenge the leader's personal deeply-held positions may be part of this process. In contrast, leaders who are eager to maintain a highly inflated view of themselves and are hypersensitive to threats against their self-esteem may lash out at others presenting ideas, perspectives, and proposals that threaten or challenge their self-concept (Baumeister et al. 1996; Kachorek et al. 2004). In short, as argued by Weick (2001, p. 102), “The leader willing to say ‘I don't know’ is also a leader willing to admit, in Oscar Wilde's wonderful phrase, ‘I'm not young enough to know everything’” (Kellman 1999, p. 113). Acknowledging areas of personal ignorance is a good starting point for learning *something* through the employees' inputs and perspectives. Hence:

*Hypothesis 2: More versus less humble leaders adopt more balanced processing behaviors.*



In adopting balanced processing behaviors, leaders have at their disposal a richer array of information and knowledge, enabling them to make better informed, and consequently wiser decisions (Fast et al. 2014). Moreover, team members develop a stronger belief in their own effectiveness by having their views respected and valued and participating in decision processes (de Jong et al. 2005; Lester et al. 2002; Owens et al 2013; Peterson et al. 2012; Rego et al. 2013). An overall effect of such positive shared beliefs is enhanced team performance (Gully et al. 2002; Sivasubramaniam et al. 2002; Stajkovic et al. 2009). In summary, leaders' balanced processing behaviors may promote team effectiveness, which is likely to be perceived by the leader's supervisor. From this we derive:

*Hypothesis 3:* Leaders who adopt more balanced processing behaviors are perceived as having stronger impact on team effectiveness.

Considering that leader humility facilitates balanced processing behaviors (H2), which is likely perceived as having a positive impact on team effectiveness (H3), we hypothesize that balanced processing mediates the relationship between leaders' humility and the perceived impact on team effectiveness. The relationship is not direct. Rather it is mediated by behavioral expressions of the leader's humility, which facilitates the leader being perceived as having a more positive impact on team effectiveness. Balanced processing of information is one such behavioral expression or mechanism. By adopting balanced processing behaviors, the humble leader is able to make better decisions, facilitating greater team effectiveness; an impact that is perceived by "significant others" (Shah, 2003) including peers. Considering the above arguments and because other mediating mechanisms may also operate, the following partial mediation is hypothesized:

*Hypothesis 4:* Leaders' balanced processing partially mediates the relationship between leader humility and his/her perceived impact on team effectiveness.

## METHOD

### Sample and procedures

Ninety six middle level managers (83.30% male; mean age: 35.3 years, *SD*: 3.6) from different organizations (sectors: energy, consulting, software, telecommunications, electronics, pharmaceutical and health-care, banking, retail, and IT) collaborated in the study. All were participants in a leadership development program conducted in a MBA subject (provided in partnership between two European/Portuguese business schools and a US top business school). Embedded within the program was a 360 degree feedback exercise assessing characteristics such as leader humility, balanced processing of information, and perceived impact on team effectiveness. The exercise was completed on a secure web platform by four categories of respondents (supervisors, peers, subordinates, and the leader him/herself). Peers and subordinates were selected by the leaders participating in the program with the following instructions: “(a) the leader should choose *diverse* peers and subordinates, with whom (s)he has had positive and less positive relationships; (b) the length of the working relationship with the informant should be at least six months; and (c) the peers could be current or former associates”. Participants were also told the exercise was conceived for developmental purposes only. In all, data from 307 subordinates and 656 peers was collected (along with data from the targeted 96 leaders and from their direct supervisors). Thirty-nine leaders were described by two subordinates, 24 by three, 19 by four, and 14 by at least five subordinates. Eight leaders were described by two to three peers, 16 by four to five, 36 by six to seven, and 36 by at least eight peers.

### Measures

All variables were measured with a 7-point scale. Individuals were asked to rate the degree to which various statements applied to a specific leader (or themselves [to me]) (1: “the statement does not apply to this leader [to me] at all”; (...); 7: “the statement applies completely to this leader [to me]”).

## The perceived impact of leaders' humility on team effectiveness

As described below, subordinate-report and peer-report data on humility, and peer-report data on balanced processing were operationalized by aggregating the data at the leader level.

*Humility* was measured with four items, one adapted from Park, Peterson, and Seligman (2004), and another from Dennis and Bocarnea (2005). Two further items were created specifically for the 360 degree tool. One item (“When not knowing the answer to a problem, he/she admits he/she doesn’t know”), was removed from the analysis for two reasons (the other three items are included in Table 1). First, the Cronbach Alpha for the self-reported data was .56 when the item was included. Second, the principal component analysis revealed that although three expected factors (of items measuring humility, balanced processing, and perceived impact on team effectiveness) emerged with eigenvalues higher than 1, the removed item presented ambivalent loadings with data from some of the samples. It is possible that, in the Portuguese high power distance culture (Hofstede 1991), assumptions of “not knowing” emerges within the minds of leaders’ (and followers) as a weakness rather than a virtue. Overall, while such a parsimonious measure of humility may suffer from low content coverage, it is consistent with Davis et al.’s (2010, p. 249) recommendation for using “simple, valid measures of humility judgments”. Cronbach Alphas are .62 (self-reported data), .82 (data from the supervisors), .81 (data from peers, at the individual level; aggregated level: .92), and .73 (data from subordinates, at the individual level; aggregated level: .84).

*Balanced processing* of information was measured with four items designed specifically for the 360 degree tool (Table 1), and worded to represent the construct definition (Avolio and Gardner 2005). Cronbach Alphas are .63 (self-reported data), .87 (data from the supervisors), .84 (data from peers, at the individual level; aggregated level: .89), and .83 (data from subordinates, at the individual level; aggregated level: .89).

*Perceived impact on team effectiveness*<sup>\*</sup> was measured with three items designed specifically for the 360 degree tool (Table 1), drawing from Awamleh and Gardner’s (1999) measure of

---

<sup>\*</sup> A portion of these data is used in another paper that reports other dependent and independent variables (Authors).

leadership effectiveness. A sample item is: "The way he/she acts is crucial to the team's effectiveness". Cronbach Alphas are .78 (self-reported data), .86 (data from the supervisors), .88 (data from peers, at the individual level; aggregated level: .92), and .87 (data from subordinates, at the individual level; aggregated level: .88).

*Control variables* of the leader's age and gender were included as they are relevant to several aspects of leadership (Ayman and Korabik 2010; Barbuto et al. 2007; Gilbert et al. 1990). Leader's trustworthiness was also included for control as trust is related to leaders' humility (Mishra and Mishra 2012; Owens and Hekman 2012; Van Dierendonck 2011) and leadership effectiveness (Caldwell et al. 2010; Crossley et al. 2013; Dirks and Skarlicki 2004). A single item ("Is a person that one can trust"; Rego and Cunha 2008) was used to measure trustworthiness, a procedure that, although not ideal, has been used successfully in organizational research (Crossley et al. 2013). We consider the approach less problematic when used for measuring control variables, as in the current study.

### **Confirmatory factor analysis**

A CFA (LISREL; maximum likelihood estimation) was carried out using data from the four rater categories to test the three-factor model: humility, balanced processing, and perceived impact on team effectiveness. As trustworthiness was measured using a single item, it was not included. A well-fitted 10-item model emerged (Table 1) from the data derived from peers and subordinates (at both the individual and aggregated levels), and from supervisors, but the fit indices for the self-report data were not satisfactory. A possible explanation is that humility influences how leaders describe themselves, not only in relation to humility but also with regard to their leadership behaviors and effectiveness (Judge et al., 2006).

The three-factor model was compared with three alternative models. The first (two-factor) alternative model differs from the three-factor model by merging humility and balanced processing.

The second (two-factor) alternative model differs from the three-factor model by merging balanced processing and perceived impact on team effectiveness. The third (single-factor) alternative model merges all variables/indicators. For all comparisons, the three-factor model fits the data significantly better than the alternative models. For example, when individual data from peers are considered, significant changes were found between the three-factor model and the first ( $\Delta\chi^2_{(2)} = 375.55; p \leq .001$ ), the second ( $\Delta\chi^2_{(2)} = 624.88; p \leq .001$ ), and the third ( $\Delta\chi^2_{(3)} = 1043.69; p \leq .001$ ) alternative models. For aggregated data, significant changes were found between the three-factor model and the first ( $\Delta\chi^2_{(2)} = 143.59; p \leq .001$ ), the second ( $\Delta\chi^2_{(2)} = 159.78; p \leq .001$ ), and the third ( $\Delta\chi^2_{(3)} = 286.29; p \leq .001$ ) alternative models. These findings suggest that the three-factor model is appropriate for interpreting the data.

---

Table 1 about here

---

### **Procedures for reducing common method variance**

We conducted three procedures to reduce common method variance: First, perceived impact on team effectiveness was measured with data from leaders' direct supervisors (Barrick et al. 1998). Second, the subordinate sample was split and data from one half were used to measure subordinate-reported humility, while data from the other half were used to measure leader's trustworthiness. Third, the peer sample was also randomly split and the data from one half were used to measure humility while the data from the other half were used to measure balanced processing. Our inclusion of self-report humility within the dataset was not problematic for common method variance, as self-report was not used to measure other variables. As the dependent variable was measured with data from direct supervisors, humility as reported by these respondents was not used to test the hypothesized model.

Following the above-mentioned procedures, we used data from different respondents to measure all of the variables within our model, including trustworthiness (used for control). Randomly splitting the peer and subordinate samples to measure the different variables was justified

as appropriate for two reasons. First, the relationship between peer-reported humility and peer-reported balanced processing was much stronger when the respective data proceeded from the same raters/peers ( $r = .67, p \leq .001$ ) than when the data came from different raters/peers ( $r = .38, p \leq .001$ ). Second, the relationship between subordinate-reported humility and subordinate-reported trustworthiness was stronger when the respective data proceeded from the same raters/subordinates ( $r = .62, p \leq .001$ ) than when it came from different raters/subordinates ( $r = .24, p \leq .05$ ).

### **Aggregating data at the leader level**

The appropriateness of aggregating data from subordinates (trustworthiness and humility) and peers (humility and balanced processing) at the leader/team level was tested using several statistical analyses.  $ICC(1)$ ,  $ICC(2)$  and  $r_{wg(J)}$  were estimated (Table 2). For calculating  $r_{WG(J)}$ , both a uniform (rectangular) null distribution and a slightly skewed distribution were assumed. It is reasonable to expect a slightly skewed distribution because of a possible leniency (severity) bias from the peers (subordinates) in describing the leaders.

The  $r_{wg(J)}$  values, considered in relation to a uniform distribution, are higher than .80. When considering a slightly skewed distribution, the  $r_{wg(J)}$  values are higher than .70. All  $r_{wg(J)}$  values are strong (LeBreton and Senter 2008).  $ICC(1)$  values are .14 (medium-large effect; LeBreton and Senter 2008), .35 (large), .29 (large), and .14 (medium-large), respectively for trustworthiness as reported by subordinates, humility as reported by subordinates, humility as reported by peers, and balanced processing as reported by peers.  $ICC(2)$  values are .33, .78, .57, and .52, respectively. Although three values are above the 0.40-0.60 range (Ehrhart et al. 2014), only one is higher than the .70 cutoff, and the value relative to trustworthiness is unsatisfactory. Regardless of the last finding relating to  $ICC(2)$ ,  $ICC(1)$  and  $r_{wg(J)}$ , aggregation of the data is nonetheless justified on the basis that that trustworthiness is used only for control. Moreover, accounting for the fact that  $ICC(2)$  is a function of unit size, it can be concluded that a low  $ICC(2)$  is not uncommon with small units (Ehrhart et al.

2014), as is the case in the current study. Bieman and Heidemeier (2010) observe that decision quality is influenced only by  $ICC(I)$  affects in relation to statistical power, while power estimates remain unaffected by the height of the mean  $r_{WG}$ . They further conclude that when  $ICC(I)$  and  $r_{WG}$  indicators yield contradictory results,  $ICC(I)$  should be taken as the more appropriate indicator.

---

Table 2 about here

---

## FINDINGS

Table 3 shows the means, standard deviations, and correlations. Trustworthiness (data from subordinates) correlates positively with humility as reported by subordinates. Humility scores proceeding from different raters do not intercorrelate, or intercorrelate only modestly. Self-reported humility correlates positively with humility as reported by the supervisor and humility as reported by peers. Humility as reported by the supervisor correlates positively with humility as reported by peers, balanced processing as reported by peers, and perceived impact on team effectiveness as reported by supervisors. Humility as reported by subordinates correlates positively with humility as reported by peers. Humility as reported by peers correlates positively with balanced processing as reported by peers. Balanced processing correlates positively with the perceived impact on team effectiveness.

---

Table 3 about here

---

The low number of raters per team/leader does not support performance of multilevel analysis. Alternatively, our use of path analysis, a subset of SEM (LISREL; maximum likelihood estimation) to test the hypothesized model, is not justifiable on two accounts. First, scholars (e.g., Goodhue et al. 2012; Iacobucci et al. 2007; McIntosh et al. 2014) argue that SEM is preferable to regressions and PLS, even in the case of small sample sizes. Second, given the small sample size, we used composite measures for humility, balanced processing of information, and perceived impact on team

## The perceived impact of leaders' humility on team effectiveness

effectiveness (i.e., for each construct the scores for respective items were averaged to form an overall construct score). Gender of the leader, age of the leader, and trustworthiness were included for control. Humility as reported by the supervisor was not included, as the dependent variable was measured with data from the same source, and would therefore inflate the relationship.

The model fits the data well (e.g., SRMR: .08; GFI: .95; CFI: .90; IFI: .92), but no direct path between any indicator of humility and the perceived impact on team effectiveness is significant. The model without direct paths between indicators of humility and the impact on team effectiveness (Figure 1) fits the data well and suggests that peer-reported humility is related to the perceived impact on team effectiveness indirectly through balanced processing (the indirect effect is significant, as shown in Figure 1). No indirect effects are found for the relationship between self-reported humility and perceived impact on team effectiveness (.02, ns), nor for the relationship between subordinate-reported humility and perceived impact on team effectiveness (.02, ns). An alternative model in which humility mediates the relationship between balanced processing and perceived impact on team effectiveness was also tested. The model makes sense in that observers may interpret balanced processing as an indicator of leader humility. Although some fit indices are satisfactory, others are not, and the paths between the three measures of humility and the perceived impact on team effectiveness are not significant. In short: while H2 and H3 are supported (for humility as reported by peers), H1 is not, and H4 is only partially supported.

Figure 1 about here

### **Post hoc analysis**

Considering literature suggesting that high (low) self-other agreement (SOA) in leadership measurement is associated with better (worse) leadership outcomes (Atwater and Yammarino 1997; Cerne et al., 2013; de Vries 2012; Fleenor et al. 2010), SOA in the measure of humility was also explored in relation to balanced processing and the perceived impact on team effectiveness.



Although being a “modest” leader (i.e., self-reporting as a less humble leader than how peers report the humility of the leader in question) relates positively and significantly with balanced processing, this variable (i.e., self-describing in a “modest” way) does not present unique predictive value. Interactive effects between self- and other-reported humility was also tested with no significant effect identified.

## DISCUSSION

### Sources for measuring a leaders' humility

Before discussing the hypothesized model (Figure 1), issues concerning the raters of leader humility are worth considering. First, differences between informant-rated versus self-reported humility warrant further attention. In the study, correlations between self and other-reported humility are low and in some cases not significant (Table 3). Moreover, peer-rated humility versus self-reported humility is more strongly associated with balanced processing. These findings support the literature (de Vries et al. 2008; Rowatt et al. 2006) suggesting low agreement between self-other report measures. They further corroborate the skepticism of some researchers on the validity of measuring humility with self-report instruments (Owens et al. 2013; Tangney 2009). Nonetheless, self-reported humility did not correlate *negatively* with informant-reported humility, suggesting that the “modesty effect” (Davis et al. 2013) might not be as pervasive as assumed. Had the “modesty effect” operated negative correlations between self-reported humility and informant-reported humility would have emerged.

The second issue worthy of further discussion concerns identifying the best informants to rate a leader's humility. While peer-reported humility correlates positively with balanced processing (Table 3), subordinate-reported humility does not. A possible explanation is that our measure of balanced processing was built with data from peers. Although different peers were used to measure humility and balanced processing, it is possible that humility “expressed” toward (some) peers reflects how

the leaders behave typically with (those and other) peers. Another possible explanation is the power-asymmetry characterizing the leader-subordinate relationship, which might impel leaders to “express” (Owens et al. 2013) themselves less humbly toward their subordinates than toward their peers. While “hard” motivational tactics may work with subordinates, they are potentially less effective with peers, with whom “soft” motivational tactics requiring humility are possibly more effective. Subordinates may also interpret typical leadership behaviors (e.g. giving orders and reprimanding) as expressing low humility, inhibiting their ability to report the true humility of their leaders. It is also possible that even very humble leaders avoid some humility-related actions (e.g., apologizing) toward subordinates fearing that such behaviors will be interpreted as a weakness and thereby undermine their authority (Basford et al. 2013; Tucker et al. 2006). Such a possibility is more likely in cultures characterized by high power distance and modest human orientation (Ou et al. 2014), as is the case in Portugal (Hofstede 1991), the country where this study was conducted, and where humility in leaders is also less valued than it is in other cultures (Mittal and Dorfman 2012).

Future studies should continue expanding this research avenue and test whether humility as rated by various informants represents different types of “expressed humility” operating through varying mechanisms and giving rise to a variety of team outcomes. To illustrate, it might be that help received from peers rather than subordinates is more likely associated with the leader’s expressing greater humility toward his/her peers than from their subordinates. Future studies may also explore the predictive power of humility as reported by direct supervisors. We did not include this measure when testing our hypothesized model, as our dependent variable was measured with data from supervisors, and we sought to reduce common method variance. However, supervisor-reported humility (a) is significantly higher than self-reported ( $t = 2.75; p \leq .01$ ), subordinate-reported ( $t = 2.89; p \leq .01$ ), and peer-reported ( $t = 2.17; p \leq .05$ ) humility, and (b) is more weakly related to balanced processing than peer-report humility (Beta: .22,  $p = .06$  against .25,  $p \leq .05$ ). It is possible that power inequality causes leaders to “express” themselves more humbly toward supervisors (than

toward subordinates and peers) with the aim of creating positive upward impressions, appearing more likeable, receiving stronger support, and more quickly obtaining promotions (Blickle et al. 2012; LaBouff et al. 2012). Future research should study if the humility “expressed” by leaders toward (rated by) their direct supervisors has consequences for how the supervisors act toward the leaders. Another issue worth considering is the comparatively modest score of self-reported humility (Table 3). One possible explanation is that the context of the leadership development program in which the data were collected may have led individuals to exercise constraint in their self-descriptions. Anticipation that their “self-portrait” would be compared with a profile developed from the responses of others may have led them to avoid generating inflated self-portraits. In summary: the findings suggest that measuring leader humility is a complex endeavor worthy of further exploration.

A last issue deserving a brief comment is evidenced in the post-hoc analysis where self-other agreement (SOA) in the humility measure does not relate to the mediating and the dependent variables. The finding is consistent with some literature suggesting that the “simultaneous consideration of both self- and others’ ratings is of little importance” and “the ratings of others are the most important factor in explaining leadership outcomes” (Fleenor et al. 2010, p. 1020; see also Brutus et al. 1999). The finding thus contradicts other literature assuming that discrepant ratings may adversely influence leadership effectiveness (Atwater and Yammarino 1997; Fleenor et al. 2010), and corroborates Fleenor et al. (2010, p. 1019) who argued that “the relationship between SOA and leader effectiveness is much more complex than initially conceptualized”. It is even possible that the complexity is reinforced by the very nature of humility. As argued by Tangney (2009, p. 487), “humility may represent a rare personality construct that is simply unamenable to direct self-report methods”. Future studies should continue to explore the issue by using other measures of humility (e.g., Ou et al. 2014; Owens et al., 2013) and relating them to other mediating and dependent variables.

### **Discussing the hypothesized model**

We now focus on the hypothesized model. Our empirical evidence suggests that: (a) leaders' humility, as reported by peers, is related with their balanced processing behaviors, (b) leaders' balanced processing is associated with the perceived impact on team effectiveness, and (c) leaders' balanced processing mediates the relationship between leader humility and perceived impact on team effectiveness. Although the mediating effect is moderate, our findings emerge from data collected from different sources, reinforcing the study's validity. The findings suggest that humbler leaders adopt more balanced processing behaviors with their team members, which contributes to the leader being perceived as more effective. It is possible that balanced processing behaviors help leaders to gather richer information, which improves decision-making, resulting in greater team effectiveness and enhanced perceptions of leaders impact on team effectiveness. The findings reported in this study support empirical evidence (e.g., Ou et al. 2014; Owens and Hekman 2012, forthcoming; Owens et al. 2013, forthcoming) indicating that humble leaders engender positive team attitudes and behaviors (such as greater engagement and team integration), enhanced learning orientation and work satisfaction, lower staff turnover, which contribute to leaders' effectiveness in achieving team objectives.

There maybe several explanations for the moderate mediating effect found in this study. One is the small sample size; another is that other mechanisms (e.g., psychological safety; psychological capital; organizational citizenship behaviors; team affective tone; and compassionate behaviors; Ou et al. 2014; van Dierendonck 2011) operate to create positive team outcomes. Future studies should include larger samples and test other mediating and moderating variables. For example, are humble leaders more effective in cultural contexts where humility is more valued (Mittal and Dorfman 2012; Oc et al. 2015; Owens et al. forthcoming)? Do humble subordinates, or those who place more value on humility, respond more favorably to humble leaders? Under what conditions is leader humility

more or less conducive to leadership effectiveness? As Owens and Hekman (2012) suggest, in some specific circumstances or environments, leader humility may be less conducive to leadership effectiveness.

### **Limitations and future studies**

In addition to the limitations and possibilities for future research discussed above, others are worthy of further exploration. First, this study used data collected indirectly within a leadership development program wherein most informants (peers and subordinates) may have been biased, as they were self-selected by the leaders themselves. Future studies should seek to avoid such a possible bias via the random selection of informants. On the other hand, given the developmental objective of the data collection, one can expect a genuine interest in the process from the participants.

Second, we are aware that the method used here raises questions about the measurement instruments. Future studies should use measures already validated and with wider coverage in terms of content and dimensions (as done in the first study). Both humility and perceived impact on team effectiveness are multi-dimensional constructs, yet we treated them as one-dimensional. The reliability for self-reported humility is lower than .70, and although the value (.62) is considered acceptable by some authors, future studies should use more established measures (e.g., Davis et al. 2011; de Vries et al. 2008; Lee and Ashton 2004, 2006; Owens et al. 2013, forthcoming).

Third, some leaders were rated by only a small number of respondents (mainly subordinates), which may explain why some *ICC(2)* are lower than desirable. Future studies should include more raters as well as a more consistent number of raters per leader (Cooper and Richardson 1986).

Fourth, future studies should use other measures of leadership effectiveness as a dependent variable, including measures of team member's *objective* performance. In being rated by the supervisor, the dependent variable may have been affected by biased descriptions: the supervisor

may have felt that their judgments of the leader were indirectly judgments of themselves. We consider, however, that this risk is minimized by the anonymity of the process and the developmental objective of the data collection.

Fifth, future studies may also consider other individual characteristics for control (e.g., narcissism; the HEXACO personality inventory; de Vries et al. 2008). Sixth, future studies may also explore the interactions of humility with other virtues, character strengths, and psychological traits (e.g., courage, perseverance) in producing effects on followers. Collins (2001) suggests that great leaders combine humility with strong personal will.

Seventh, as a cross-sectional correlational study, our findings do not establish causality. One may consider, for example, that leaders behave more humbly (and adopt more balanced processing behaviors) toward teams that perceive them as more effective. Future studies should use longitudinal and experimental or quasi-experimental designs to assess causality.

Finally, by suggesting that leader humility is related to balanced processing, a dimension of the authentic leadership (AL) construct (Avolio and Mhatre 2012), future studies may benefit from incorporating humility into the AL research agenda (Gardner et al. 2011). Considering the virtuous nature of AL, it is somewhat surprising that the AL literature has neglected humility as a predictor (Avolio and Mhatre 2012; Gardner et al. 2011). In fact, several demonstrations, or measurement indicators, of AL require or reflect humility (see ALI, *Authentic Leadership Inventory*, Neider and Schriesheim 2011; see also ALQ, *Authentic Leadership Questionnaire*; Copyright © 2007 by Avolio, Gardner & Walumbwa). Examples are: (a) admitting mistakes when they occur, (b) listening carefully to different views before reaching a conclusion, (c) accurately describing how others view oneself, (d) being able to reevaluate one's positions on important issues, and (e) asking for ideas that challenge one's core beliefs. Scholars such as May et al. (2003, p. 249) argue that, "authentic leaders are humble and are less likely to feel the need to take center stage or demand anyone's attention". Therefore, although it is out of scope of this

paper to develop an in-depth discussion of the topic, we advance that future studies should ponder including humility as an AL component. This would imply reorganizing the dimensional structure of the AL construct, and eventually moving items measuring the “relational transparency” dimension to the “humility” dimension (e.g., the leader “admits mistakes when they occur”; Neider and Schriesheim 2011).

Treating humility as a possible dimension, or component, of AL would involve, however, important theoretical and empirical challenges, for at least two reasons. First, both humility and authenticity has been proposed as components of servant leadership (Van Dierendonck 2011; van Dierendonck and Nuijten 2011; van Dierendonck and Patterson 2015). Considering such a convergence between different leadership theories and approaches, researchers should carry out significant efforts, both individually and collaboratively, to clarify the field and reach towards a unified construct. A possible approach could be in forming a second-order constructs (e.g., “responsible leadership”; “virtuous leadership”; “temperate leadership”) from several first-order constructs, which now belong in different constructs/models. Second, some dimensions may have a complex relationship with others. For example, it is possible to be transparent (a dimension of AL) without being humble. A narcissistic and abrasive leader may be transparent (i.e., telling the hard truth, saying exactly what he or she means; displaying emotions exactly in line with feelings) precisely because he or she is not humble enough to be silent and temperate natural impulses (Owens et al. forthcoming). In short we consider that the seemingly natural, although complex, relationship between humility and other leadership theories and constructs deserves significant efforts towards clarification by the scholarly community.

## **Conclusion**

Chancellor and Lyubomirsky (2013, p. 819) argue that humility “may be the most overlooked and underappreciated virtue”, including in current organizational practices (Chowdhury 2013; Edmondson 2012). The current study contributes to the emerging movement seeking to bring humility to leadership (Morris et al. 2005), making several contributions that may be further explored in future research. First, it indicates that humility is relevant to leadership and suggests a positive association between humble leadership and effective team performance. This influence may be explained by mediating mechanisms such as the leader’s balanced processing of information. Future studies should test the unique predictive value of other/complementary mediators. Second, the study corroborates literature suggesting that self-reported humility is not a valid measure of humility, with ratings from other informants being more reliable. Another issue concerns the most suitable kind of informant. We do not attempt to provide a definitive answer to this challenging question. There are theoretical reasons for considering peers, subordinates, and supervisors appropriate, and future studies should continue to explore if different raters are relevant for understanding how leaders “express” (Owens et al. 2013) different “humilities” toward a variety of interlocutors with various impacts upon these different targets. Third, we suggest incorporating humility into the authentic leadership research agenda (Gardner et al. 2011).

Our study is not free of limitations. For example, the cross-sectional correlational design does not support causal relationships, indicating the need for other research approaches to determine causality. Nonetheless, our cautionary research approach of measuring a variety of variables using data from different sources adds validity to the study and provides strength to the implications for humble leadership theory. Relying upon humility as an important trait for selecting leaders may therefore be appropriate. Development programs emphasizing the importance of humility in leadership and countering notions of humility as a weakness and sign of low self-esteem also hold great promise and potential benefit.



Humility, like virtue in general, is valuable *per se*. It is crucial for providing the foundation for moral action within organizations and fostering positively deviant behavior (i.e., exceptional performance, gratitude actions, trustworthiness, altruistic behavior; Cameron and Caza 2004). However, as Cameron (2004, p. 770) suggested, "Virtuousness in organizations (...) is unlikely to capture attention without pragmatic outcomes". Our study contributes by explaining how humility in leaders may result in important organizational benefits.

## References

- Argandoña, A. (2014). Humility in management. *Journal of Business Ethics*, published online ahead of print.
- Ashton, M. C., & Lee, K. (2001). A theoretical basis for the major dimensions of personality. *European Journal of Personality*, *15*(5), 327-353.
- Avolio, B., & Gardner, W. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, *16*(3), 315-338.
- Avolio B.J., Gardner, W.L., Walumbwa, F. O., Luthans F, & May, D.R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors, *The Leadership Quarterly*, *15*(6), 801–23.
- Avolio, B. J., & Mhatre, K. H. (2012). Advances in theory and research on authentic leadership. *The Oxford handbook of positive organizational scholarship*, Oxford University Press, Oxford, 773-783.
- Awamleh, R. & Gardner, W. L. (1999). Perceptions of leader charisma and effectiveness: the effects of vision content, delivery, and organizational performance. *The Leadership Quarterly*, *10*(3), 345-373.
- Ayman, R. & Korabik, K. (2010). Leadership: Why gender and culture matter. *American Psychologist*, *65*(3), 157-170.

- Barbuto, J. E.Jr., Fritz, S., Matkin, G. S., & Marx, D. B. (2007). Effects of gender, education, and age upon leaders' use of influence tactics and full range leadership behaviors. *Sex Roles, 56*(1-2), 71-83.
- Barrick, M. R., Stewart, G. L., Neubert, M. J. & Mount, M. K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology, 83*(3), 377-391.
- Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly, 47*(4), 644-675.
- Basford, T. E., Offerman, L. R., & Behrend, T. S. (2013). "Please accept my sincerest apologies:" Examining follower reactions to leader apology. *Journal of Business Ethics, 119*(1), 99-117.
- Baumeister, R.F., Smart, L. & Boden, J.M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review, 103*(1), 5-33.
- Biemann, T., Cole, M. S., & Voelpel, S. (2012). Within-group agreement: On the use (and misuse) of rwg and rwg(J) in leadership research and some best practice guidelines. *The Leadership Quarterly, 23*(1), 66-80.
- Biemann, T. & Heidemeier, H. (2010). On the usefulness of the ICC(1) and rwg index to justify aggregation decisions. *Academy of Management Proceedings, 2010*(1), 1-7.
- Blickle, G., Diekmann, C., Schneider, P. B., Kalthöfer, Y., & Summers, J. K. (2012). When modesty wins: Impression management through modesty, political skill, and career success—a two-study investigation. *European Journal of Work and Organizational Psychology, 21*(6), 899-922.
- Boje, D. M., Roslie, G. A., Durant, R. A., & Luhman, J. T. (2004). Enron spectacles: A critical dramaturgical analysis. *Organization Studies, 25*(5), 751–774.

- Brutus, S., Fleenor, J. W., & McCauley, C. D. (1999). Demographic and personality predictors of congruence in multi-source ratings. *The Journal of Management Development*, 18(5), 417–435.
- Caldwell, C., Hayes, L. A. & Long, D. T. (2010). Leadership, trustworthiness, and ethical stewardship. *Journal of Business Ethics*, 96(4), 497-512.
- Cameron, K. S. & Caza, A. (2004). Introduction: Contributions to the discipline of Positive Organizational Scholarship. *American Behavioral Scientist*, 47(6), 731-739.
- Cameron, K. S., & Spreitzer, G. M. (2012). *The Oxford handbook of positive organizational scholarship*. New York: Oxford University Press.
- Cameron, K., & Winn, B. (2012). Virtuousness in organizations. In K. S. Cameron & G. Spreitzer (Eds.), *The Oxford handbook of positive organizational scholarship* (pp. 231-243). Oxford: Oxford University Press.
- Cascio, W. F. & Luthans, F. (2014). Reflections on the metamorphosis at Robben Island: The role of institutional work and positive psychological capital. *Journal of Management Inquiry*, 23(1), 51-67.
- Cerne, M., Dimovski, V., Maric, L., Penger, S., & Skerlavaj, M. (2013). Congruence of leader self-perceptions and follower perceptions of authentic leadership: Understanding what authentic leadership is and how it enhances employees' job satisfaction. *Australian Journal of Management*, 39(3), 453-471.
- Chancellor, J., & Lyubomirsky, S. (2013). Humble beginnings: Current trends, state perspectives, and hallmarks of humility. *Social and Personality Psychology Compass*, 7(11), 819-833.
- Chowdhury, S.D. (2014). Strategic roads that diverge or converge: GM and Toyota in the battle for the top. *Business Horizons*, 57(1), 127-136.
- Collins, J. (2001). Level 5 leadership. *Harvard Business Review*, 79(1), 66-76.

- Connelly, B. S., & Ones, D. S. (2010). Another perspective on personality: Meta-analytic integration of observers' accuracy and predictive validity. *Psychological Bulletin*, *36*(6), 1092-1122.
- Cooper, W.H., & Richardson, A.J. (1986). Unfair comparisons. *Journal of Applied Psychology*, *71*(2), 179-184.
- Crossley, C. D., Cooper, C. D. & Wernsing, T. S. (2013). Making things happen through challenging goals: Leader proactivity, trust, and business-unit performance. *Journal of Applied Psychology*, *98*(3), 540-549.
- Davis, D. E., Hook, J. N., Worthington Jr, E. L., Van Tongeren, D. R., Gartner, A. L., Jennings, D. J., & Emmons, R. A. (2011). Relational humility: Conceptualizing and measuring humility as a personality judgment. *Journal of Personality Assessment*, *93*(3), 225-234.
- Davis, D. E., Worthington Jr, E. L., & Hook, J. N. (2010). Humility: Review of measurement strategies and conceptualization as personality judgment. *Journal of Positive Psychology*, *5*(4), 243-252.
- Davis, D. E., Worthington Jr, E. L., Hook, J. N., Emmons, R. A., Hill, P. C., Bollinger, R. A., & Van Tongeren, D. R. (2013). Humility and the development and repair of social bonds: Two longitudinal studies. *Self and Identity*, *12*(1), 58-77.
- de Jong, A., de Ruyter, K., & Wetzels, M. (2005). Antecedents and consequences of group potency: A study of self-managing service teams. *Management Science*, *51*(11), 1610-1625.
- De Jong, B.A. & Elfring, T. (2010). How does trust affect the performance of ongoing teams? The mediating role of reflexivity, monitoring, and effort. *Academy of Management Journal*, *53*(3), 535-49.
- de Vries, R.E. (2012). Personality predictors of leadership styles and the self-other agreement problem. *The Leadership Quarterly*, *23*(5), 809-821.

- de Vries, R. E., Lee, K., & Ashton, M. C. (2008). The Dutch HEXACO Personality Inventory: Psychometric properties, self–other agreement, and relations with psychopathy among low and high acquaintanceship dyads. *Journal of Personality Assessment, 90*(2), 142-151.
- Dennis, R. S., & Bocarnea, M. (2005). Development of the servant leadership assessment instrument. *Leadership & Organization Development Journal, 26*(8), 600-615.
- Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: meta-analytic findings and implications for research and practice. *Journal of Applied Psychology, 87*(4), 611-628.
- Dirks, K. T., & Skarlicki, D. P. (2004). Trust in leaders: Existing research and emerging issues. In R. Kramer & K. Cook (Eds.), *Trust and distrust in organizations: Dilemmas and approaches* (pp. 21-41). New York: Russell Sage.
- Donaldson, S. I. & Ko, I. (2010). Positive organizational psychology, behavior, and scholarship: A review of the emerging literature and evidence base. *The Journal of Positive Psychology, 5*(3), 177-191.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*(2), 350-383.
- Edmondson, A. C. (2003). Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. *Journal of Management Studies, 40*(6), 1419-1452.
- Edmondson, A.C. (2004). Psychological safety, trust, and learning in organizations: a group-level lens. In R. M. Kramer, & K.S. Cook (Eds.), *Trust and distrust in organizations: Dilemmas and approaches* (pp. 239–272). New York: Russell Sage Foundation.
- Edmondson, A. C. (2008). The competitive imperative of learning. *Harvard Business Review, July-August 86*(7/8), 60-67.
- Edmondson, A. C. (2012). *Teaming: how organizations learn, innovate, and compete in the knowledge economy*. San Francisco: Jossey-Bass.

- Edmondson, A. C. & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 23-43.
- Ehrhart, M. G., Schneider, B., & Macey, W. H. (2014). *Organizational climate and culture: An introduction to theory, research, and practice*. New York: Routledge.
- Fast, N.J., Burris, E. & Bartel, G. (2014). Managing to stay in the dark: Managerial self-efficacy, ego defensiveness, and the aversion to employee voice. *Academy of Management Journal*, 57(4), 1013-1034.
- Fleenor, J. W., Smither, J. W., Atwater, L. E., Braddy, P. W., & Sturm, R. E. (2010). Self-other rating agreement in leadership: A review. *The Leadership Quarterly*, 21(6), 1005–1034.
- Gardner, W. L., Cogliser, C. C., Davis, K. M., & Dickens, M.P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly*, 22(6), 1120-1145.
- Gilbert, G. R., Collins, R. W., & Brenner, R. (1990). Age and leadership effectiveness: From the perceptions of the follower. *Human Resource Management*, 29(2), 187-196.
- Goddard, J. & Eccles, T. (2013). *Uncommon sense, common nonsense*. London: Profile Books.
- Goncalo, J. A., Polman, E. & Maslach, C. (2008). Can confidence come too soon? Collective efficacy, conflict and group performance over time. *Organizational Behavior and Human Decision Processes*. 113(1), 13-24.
- Goodhue, D. L., Lewis, W., & Thompson, R. (2012). Does PLS have advantages for small sample size or non-normal data? *MIS Quarterly*, 36(3), 891-1001.
- Goodwin, D. K. (2005). *Team of rivals: The political genius of Abraham Lincoln*. New York: Simon & Schuster.
- Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. (2002). A meta-analysis of team-efficacy, potency, and performance: interdependence and level of analysis as moderators of observed relationships. *Journal of Applied Psychology*, 87(5), 819-832.

- Hofstede, G. (1991). *Cultures and organizations: Software of the mind*. London: McGraw-Hill.
- Hühn, M. P. (2014). You reap what you sow: How MBA programs undermine ethics. *Journal of Business Ethics*, *121*(4), 527-541.
- Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology*, *17*(2), 139-153.
- Jesuino, J. C. (2002). Latin Europe cluster: From South to North. *Journal of World Business*, *37*(1), 81-89.
- Judge, T. A., LePine, J. A., & Rich, B. L. (2006). Loving yourself abundantly: Relationship of the narcissistic personality to self- and other perceptions of workplace deviance, leadership, and task and contextual performance. *Journal of Applied Psychology*, *91*(4), 762-776.
- Jung, D. I., & Sosik, J. J. (2003). Group potency and collective efficacy: Examining their predictive validity, level and analysis, and effects of performance feedback on future group performance. *Group & Organization Management*, *28*(3), 366-391.
- Kachorek, L. V., Exline, J. J., Campbell, W. K., Baumeister, R. F., Joiner, T., & Krueger, J. I. (2004). Humility and modesty. In C. Peterson & M. E. P. Seligman (Eds.), *Character strengths and virtues: A handbook and classification* (pp. 461-475). New York: Oxford University Press.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, *33*(4), 692-724.
- Kellman, S.G. (1999). Swan songs. *American Scholar*, *68*(4), 111-20.
- Kozlowski, S. W. J., & Bell, B. S. (2003). Work groups and teams in organizations. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology* (Vol. 12): Industrial and Organizational Psychology (pp. 333-375). New York: Wiley.

- LaBouff, J. P., Rowatt, W. C., Johnson, M. K., Tsang, J.-A., & Willerton, G. M. (2012). Humble persons are more helpful than less humble persons: Evidence from three studies. *Journal of Positive Psychology, 7*(1), 16-29.
- LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods, 11*(4), 815-852.
- Lee, K. & Ashton, M.C. (2004). Psychometric properties of the hexaco personality inventory. *Multivariate Behavioral Research, 39*(2), 329-58.
- Lee, K. & Ashton, M.C. (2006). Further assessment of the hexaco personality inventory: Two new facet scales and an observer report form. *Psychological Assessment, 18*(2), 182-91.
- Leroy, H., Palanski, M. E., & Simons, T. (2012). Authentic leadership and behavioral integrity as drivers of follower commitment and performance. *Journal of Business Ethics, 107*(3), 255-264.
- Lester, S. W., Meglino, B. M., & Korsgaard, M. A. (2002). The antecedents and consequences of group potency: A longitudinal investigation of newly formed work groups. *Academy of Management Journal, 45*(2), 352-368.
- May, D., Chan, A., Hodges, T., & Avolio, B. (2003). Developing the moral component of authentic leadership. *Organizational Dynamics, 32*(3), 247-260.
- McIntosh, C. N., Edwards, J. R., & Antonakis, J. (2014). Reflections on Partial Least Squares path modeling. *Organizational Research Methods, 17*(2), 210-251.
- Mishra, A. K., & Mishra, K. E. (2012). Positive organizational scholarship and trust in leaders. In K. S. Cameron & G. M. Spreitzer (Eds.), *The Oxford handbook of positive organizational scholarship* (pp. 449-461). Oxford: Oxford University Press.
- Mittal, R., & Dorfman, P. W. (2012). Servant leadership across cultures. *Journal of World Business, 47*(4), 555-570.



- Morris, J. A., Brotheridge, C. M., & Urbanski, J. C. (2005). Bringing humility to leadership: Antecedents and consequences of leader humility. *Human Relations, 58*(10), 1323-1350.
- Neider, L. L. & Schriesheim, A. C. (2011). The Authentic Leadership Inventory (ALI): Development and empirical tests. *The Leadership Quarterly, 22*(6), 1146-1164.
- Oc, B., Basshur, M. R., Daniels, M. A., Greguras, G. J., & Diefendorff, J. M. (2015). Leader humility in Singapore. *The Leadership Quarterly, 26*(1), 68-80.
- Oh, I.-S., Wang, G., & Mount, M. K. (2011). Validity of observer ratings of FFM personality traits: A meta-analysis. *Journal of Applied Psychology, 96*(4), 762-773.
- Ou, A. Y, Tsui, A. S., Kinicki, A. J., Wladman, D. A., Xiao, Z., & Song, L. J. (2014). Humble Chief Executive Officers' connections to top management team integration and middle managers' responses, *Administrative Science Quarterly, 59*(1)34–72.
- Owens, B. P. & Hekman, D. R. (2015). How does leader humility influence team performance? Exploring the mechanisms of contagion and collective promotion focus. *Academy of Management Journal*, published online ahead of print.
- Owens, B. P., & Hekman, D. R. (2012). Modeling how to grow: An inductive examination of humble leader behaviors, contingencies, and outcomes. *Academy of Management Journal, 55*(4), 787-818.
- Owens, B. P., Johnson, M. D., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science, 24*(5), 1517-1538.
- Owens, B. P., Rowatt, W. C., & Wilkins, A. L. (2012). Exploring the relevance and implications of humility in organizations. In K. Cameron & G. Spreitzer (Eds.), *Handbook of Positive Organizational Scholarship* (pp. 260-272). New York: Oxford University Press.

- Owens, B. P., Walker, A. S., & Waldman, D. A. (2015). Leader narcissism and follower outcomes: The counterbalancing effect of leader humility. *Journal of Applied Psychology*, published online ahead of print.
- Park, N., Peterson, C., & Seligman, M. E. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology, 23*(5), 603-619.
- Paulhus, D. L. & Reid, D. B. (1991). Enhancement and denial in socially desirable responding. *Journal of Personality and Social Psychology, 60*(2), 307–317.
- Peterson, C. & Seligman, M. E. P (2004). *Character strengths and virtues: A handbook and classification*. Washington, D.C.: APA Press and Oxford University Press.
- Podsakoff, P.M., MacKenzie, S.B. & Podsakoff, N.P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*, 539-69.
- Rego, A. & Cunha, M. P. (2008). Perceptions of authentic climates and employee happiness: pathways to individual performance? *Journal of Business Research, 61*(7), 739-752.
- Rego, A., Vitória, A., Magalhães, A., & Ribeiro, N. (2013). Are authentic leaders associated with more virtuous, committed and potent teams? *The Leadership Quarterly, 24*(1), 61-79.
- Rowatt, W. C., Powers, C., Targhetta, V., Comer, J., Kennedy, S., & Labouff, J. (2006). Development and initial validation of an implicit measure of humility relative to arrogance. *Journal of Positive Psychology, 1*(4), 198-211.
- Schrage, M. (2015). Embrace your ignorance. *MIT Sloan Management Review, 56*(2), 95-96.
- Segreti, G. (2013). Pope Francis: Mass appeal. *Financial Times*, August 2 (<http://www.ft.com/intl/cms/s/0/0761fcfa-f9e4-11e2-b8ef-00144feabdc0.html#axzz38BSkBi1m>).
- Shah, J. Y. (2003). The motivational looking glass: How significant others implicitly affect goal appraisals. *Journal of Personality and Social Psychology, 85*(3), 424-439.

- Sivasubramaniam, N., Murry, W.D., Avolio, B.J. & Jung, D.I. (2002). A longitudinal model of the effects of team leadership and group potency on group performance. *Group & Organization Management*, 27(1), 66-96.
- Stajkovic, A. D., Lee, D., & Nyberg, A. J. (2009). Collective efficacy, group potency, and group performance: meta-analyses of their relationships, and test of a mediation model. *Journal of Applied Psychology*, 94(3), 814-828.
- Tangney, J. P. (2009). Humility. In S. Lopez & C. Snyder (Eds.), *Oxford Handbook of Positive Psychology* (pp. 483-490). New York: Oxford University Press.
- The Economist (2013). *The global-leadership industry needs re-engineering*. January 26th, 59.
- Tucker, S., Turner, N., Barling, J., Reid, E.M. & Elving, C. (2006). Apologies and transformational leadership. *Journal of Business Ethics*, 63(2), 195-207.
- Vallely, P. (2013). *Pope Francis: Untying the knots*. London: Bloomsbury.
- van Dierendonck, D. (2011). Servant leadership: A review and synthesis. *Journal of Management*, 37(4), 1228-1261.
- van Dierendonck, D. & Nuijten, I. (2011). The servant leadership survey: Development and validation of a multidimensional measure. *Journal of Business and Psychology*, 26(3), 249-267.
- van Dierendonck, D. & Patterson, K. (2015). Compassionate love as a cornerstone of servant leadership: An integration of previous theorizing and research. *Journal of Business Ethics*, 128(1), 119-131
- Vera, D., & Rodriguez-Lopez, A. (2004). Strategic virtues: Humility as a source of competitive advantage. *Organizational Dynamics*, 33(4), 393-408.
- Weick, K. E. (2001). Leadership as the legitimation of doubt. In W. Bennis, G. Spreitzer & T. Cummings (Eds.), *The future of leadership: Today's top leadership thinkers speak to tomorrow's leaders* (pp. 91-102). San Francisco: Jossey-Bass.

Weiss, H. M., & Knight, P. A, 1980. The utility of humility: Self-esteem, information search, and problem-solving efficiency. *Organizational Behavior and Human Performance*, 25(2), 216–223.

Yammarino, F.J. & Atwater, L.W. (1997). Do managers see themselves as others see them? Implications of self-other rating agreement for human resources management. *Organizational Dynamics*, 25(4), 35-44.