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Humble Leadership: Implications for Psychological Safety and Follower Engagement

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Abstract

Humility has emerged as a focus of leadership research in recent years, culminating with Owens and Hekman's (2012) theory of humble leadership. The present study added to the humble leadership literature by examining the relations among leader humility, psychological safety, and employee engagement. In particular, this study examined these constructs in the context of a mediational model. Data were collected from 140 workers who reported their perceptions of their immediate supervisor's humility, as well as their own psychological safety and work engagement. The results of a hierarchical linear regression showed that the relation between humble leadership and employee engagement was fully mediated by psychological safety. Specifically, the positive relation between humble leadership and employee engagement became non-significant after controlling for psychological safety, which had positive relations with both the predictor and criterion variables. Thus, by acknowledging limitations and mistakes, recognizing followers' strengths and contributions, and modeling teachability, leaders can create an environment in which followers can act without fear of negative ramifications and can fully engage in their work.

Chapter I

Review of the Literature

Since the late 1930s, more than 65 classification systems have emerged to describe the dimensions of leader behavior (Fleishman et al., 1991). Most of these systems can, however, be condensed into a single definition of leadership: “a process whereby an individual influences a group of individuals to achieve a common goal” (Northouse, 2010, p. 12). Still, problems arise in determining how best to lead, as seen in the wide variety of approaches described in the literature—perspectives ranging from the Ohio Leadership Studies’ consideration and initiating structure dimensions to the more contemporary theory of authentic leadership (Fleishman & Harris, 1962; Luthans & Avolio, 2003).

Recently, focus turned toward humility as an important characteristic of effective leadership (Owens & Hekman, 2012). In the past, humility played a peripheral role in leadership perspectives such as servant leadership and Level 5 leadership, a leadership style characterized by a combination of professional will and personal humility (Collins, 2001; May, Chan, Hodges, & Avolio, 2003). However, Owens and Hekman (2012) changed its role from peripheral to central by emphasizing leader humility as the mechanism behind successful leadership. Two possible ways to assess the success of a leader are followers’ psychological safety and level of engagement.

Previous research has theoretically and empirically explored the relations between leadership and follower engagement (Christian, Garza, & Slaughter, 2011), leader behaviors and psychological safety (Edmondson, 2004), and psychological safety and follower engagement

(May, Gilson, & Harter, 2004). However, the literature has not examined the three constructs in a mediational model, particularly in the context of humble leadership. Therefore, the purpose of this study was to empirically test a mediational model of these three constructs in order to assess the hypothesis that psychological safety mediates the relation between humble leadership and follower engagement.

Humble Leadership

The advent of positive psychology in the early 2000s spurred interest in character strengths, including humility, in the psychological literature (Owens, Rowatt, & Wilkins, 2011). Previous work on humility centered primarily in the realms of philosophy and religion, where humility is regarded as an accurate opinion of oneself and acknowledgement of the existence of something greater than the self (Tangney, 2000). Positive psychologists built on this conceptualization in defining humility as “letting one’s accomplishments speak for themselves; not seeking the spotlight; [and] not regarding oneself as more special than one is” (Peterson, 2006, p. 144). Furthermore, they categorized humility as a strength of temperance, which is a virtue said to protect from excess (Peterson & Seligman, 2004). Vera and Rodriguez-Lopez (2004) corroborated the value of strengths of temperance through their observation that, in the wake of corporate scandals and the emergence of increasingly dynamic organizational environments, humility is an important characteristic of effective leaders. In particular, they asserted that humility would allow executives to avoid problems associated with self-complacency and overconfidence, to facilitate organizational learning, and to develop organizational resilience.

This call for emphasis on humility in leadership is paralleled by a discussion of humility in the context of existing leadership theories. For example, Collins (2001) conceptualized Level

5 leadership, the top-most tier in a hierarchy of leader capabilities, as a combination of personal humility and professional will. From this perspective, leader humility involves acting with a calm and quiet demeanor, motivating followers with inspiring standards rather than charisma, and giving credit for success to the team while accepting blame for poor results (Collins, 2001). Alternatively, characteristics of authentic leaders—a sense of self-awareness, expression of values, and transparency regarding desires and expectations—have also been described as intrinsically humble (May et al., 2003). Furthermore, both transformational leadership and servant leadership, two similar but distinct perspectives, possess features that could be characterized as expressions of humility—appreciation of others, mentoring or teaching, and empowering followers (Stone, Russell, & Patterson, 2003). However, although it could be argued that aspects of humility were present in each of these perspectives, none of them agreed on a definition of humility or specifically emphasized humility as the determinant of successful leadership.

In response to the aforementioned problems, a recent line of research sought to clarify the definition of humility, to develop a psychometrically sound tool for the measurement of humility, and to explore the utility of humility in the context of leadership (Owens, 2009; Owens et al., 2011; Owens & Hekman, 2012; Owens, Johnson, & Mitchell, 2013). In addition, Owens and Hekman (2012) developed a theoretical model of humble leader behavior, including its mechanisms, contingencies, and outcomes.

A new definition of humility. Through a review focused on the psychological, philosophical, and theological literatures, Owens (2009) identified four possible components of humility: willingness to view oneself accurately, appreciation of others' strengths and contributions, teachability, and low self-focus. The author then generated a 12-item scale

designed to assess these four components. Owens et al. (2013) conducted an exploratory factor analysis on the 12-item scale and removed items with factor loadings below .20 or cross loadings above .40. This process eliminated the three items measuring low self-focus, resulting in a nine-item, three-factor scale. This finding informed the subsequent definition of humility, as well as the development of the Expressed Humility Scale. Therefore, expressed humility can be defined as “an interpersonal characteristic that emerges in social contexts that connotes (a) a manifested willingness to view oneself accurately, (b) a displayed appreciation of others’ strengths and contributions, and (c) teachability” (Owens et al., 2013, p. 1518).

A theoretical model of humble leadership. Owens and Hekman (2012) conducted a series of interviews with 55 leaders from various fields and across various executive levels in order to gather their insights on humility within the leadership context. These interviews followed a protocol designed to elicit stories and critical incidents of humble leader behavior exhibited by both the interviewees themselves and others whom they considered to be humble leaders. Interviewees’ responses were coded and transformed into a theoretical model of humble leader behaviors and their contingencies, follower perceptions of those behaviors, and overall outcomes (Owens & Hekman, 2012).

Humble leader behaviors and contingencies. The three categories of humble leader behavior mapped directly onto the definition of humility proposed earlier (Owens et al., 2013). The first category, acknowledging limitations and mistakes, was consistent with the willingness to view oneself accurately referred to in the definition of expressed humility. This category included admitting mistakes, acknowledging deficits in experience or knowledge, and taking responsibility for failures. However, the effectiveness of these behaviors was contingent on the leader’s competence; humility was perceived as weakness in leaders who did not demonstrate a

degree of expertise, decisiveness, and confidence.

The second category involved recognizing followers' strengths and contributions. Here, leaders verbalized their appreciation for subordinates' contributions, acknowledged followers' strengths and made them known to others, and referred to the team when talking about successes. In essence, humble leaders made sure to communicate the value added to the team by each individual follower. However, the effectiveness of these behaviors was contingent on followers' perceptions of leaders' sincerity. False humility fostered suspicion and contempt in followers.

The third category of humble leader behaviors concerned modeling teachability. Owens and Hekman (2012) argued that this was the most crucial aspect of humble leadership. This category of behaviors included a demonstrated openness toward learning, modeling tasks for followers, seeking feedback, listening, and considering alternative perspectives. However, there were also three contingencies associated with these behaviors. First, to the extent that the situation involved extreme time pressure or threat, leaders who modeled teachability were perceived as unwilling to lead and take control over the situation. Second, the success of modeling teachability was contingent on the organizational culture being conducive to such methods; it was not well received in cultures of competition or rivalry. Lastly, greater emphasis on hierarchical adherence within the organization was associated with reduced instances of humble leader behavior, perhaps due to greater risk to the leader in such contexts (Owens et al., 2013).

Follower perceptions as a mechanism. Owens and Hekman (2012) suggested that two types of follower perceptions acted as mechanisms within the model. The first follower perception was legitimizing followers' developmental journeys. By displaying humble behavior, leaders fostered a development orientation and demonstrated that it was acceptable to make

mistakes. The second follower perception was of the leader legitimizing uncertainty. This referred to the leader validating followers' uncertainty and encouraging a learning environment. These two types of perceptions were proposed as the mechanism through which humble leadership influences follower outcomes.

Outcomes. Humble leadership was proposed to be associated with four outcomes: fluidity of organizing, continuous small change, follower engagement, and psychological freedom. Specifically, the model posited that the followers' perceptions of the leader legitimizing uncertainty led to greater ability of the team to transition between different structures in response to changing situations, as well as to a preference for small, continuous changes over large, infrequent changes. Owens and Hekman (2012) found that units headed by humble leaders tended to function in a bottom-up manner, but easily adjusted when the situation called for more top-down leadership. Furthermore, such units tended to make constant evaluations and readjustments, leading to small, frequent changes.

Lastly, and of particular interest to the present study, were the outcomes resulting from followers' perception of the leader legitimizing their developmental journeys. This perception was suggested to lead to greater employee engagement and psychological freedom. In essence, humble leaders created a safe environment for employees and motivated them to exhibit their best performance (Owens & Hekman, 2012).

Support for model. Using the newly developed Expressed Humility Scale, Owens and colleagues (2013) provided some empirical support for the aforementioned theoretical model of humble leadership proposed by Owens and Hekman (2012). On an individual level, humility was positively related to team member contributions in group projects and individual performance. It also predicted individual performance above and beyond self-efficacy, conscientiousness, and

general mental ability. At the level of leadership, humility was negatively related to voluntary job turnover among subordinates and positively related to subordinates' job satisfaction. Furthermore, and of particular interest to the present study, humility was established as a predictor of follower engagement.

Employee Engagement

Defining engagement. A recent study aimed at providing an integrative definition of engagement offered the following conceptualization: “a relatively enduring state of mind referring to the simultaneous investment of personal energies in the experience of performance of work” (Christian et al., 2011, p. 95). In other words, engagement involves a malleable, but relatively stable sense of connection to one's work and investment of personal resources toward a work role. Christian and colleagues (2011) provided this definition in part to clarify the conceptual space of engagement, as many definitions of engagement had previously been proposed, many of which overlapped with existing constructs (Saks, 2006). However, the earliest and most enduring conceptualization of engagement came from Kahn's (1990) framework of personal engagement and disengagement. Personal engagement was defined as “the harnessing of organizational members' selves to their work roles” (Kahn, 1990, p. 694) and was characterized by full utilization of physical, cognitive, and emotional resources while working. Kahn (1990) described personal disengagement, on the other hand, as “the uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, and emotionally during role performance” (p. 694). It is important to note that employee engagement has also been referred to as work engagement and job engagement in the literature (e.g., Christian et al., 2011; Rich, LePine, & Crawford, 2010). In this paper, these labels and the term “engagement” are used interchangeably to refer to the construct of

engagement at work.

Antecedents and consequences. This framework of engagement, first proposed by Kahn (1990) and later empirically supported by May et al. (2004), suggests that engagement has three antecedents: meaningfulness, safety, and availability. Psychological meaningfulness refers to the degree to which an individual believes that his or her job has value in the context of the individual's beliefs and ideals (Renn & Vandenberg, 1995). Meaningfulness was predicted by job enrichment and work role fit (May et al., 2004). Psychological safety, which is examined in greater detail below, is the feeling that one can act as oneself without fear of negative ramifications (Kahn, 1990). Furthermore, it is predicted by relationships with coworkers and supervisors, coworker norms, and personal self-consciousness (May et al., 2004). Finally, psychological availability refers to the extent to which an individual believes that he or she possesses the physical, cognitive, or emotional resources needed to engage at work (Kahn, 1990). Availability is predicted by both the degree to which individuals possess resources and their degree of involvement in outside activities and organizations (May et al., 2004). Additionally, Saks (2006) identified several other predictors of engagement that are relevant to the present research: organizational support, procedural justice, and job characteristics—skill variety, task identity, task significance, autonomy, and feedback. These predictors of engagement are important in that they parallel Owens and Hekman's (2012) humble leader behaviors: matching followers' strengths with tasks aligns with task identity and significance, giving decision-making discretion and voice coincides with autonomy, and encouraging followers' growth and learning corresponds with feedback and organizational support. Moreover, Owens et al. (2013) found that humble leadership positively predicted follower engagement.

Although providing several antecedents, Kahn's (1990) original framework did not

propose consequences of engagement. However, more recent work has identified several outcomes related to follower engagement. For example, Saks (2006) found that job and organization engagement accounted for significant variance in job satisfaction, organizational commitment, and intentions to quit. Engagement also predicted task performance and contextual performance, a construct similar to organizational citizenship behavior that includes expending additional effort to complete more than required for the good of the organization (Christian et al., 2011; Saks, 2006). Additionally, a meta-analysis by Harter, Schmidt, and Hayes (2002) found that there was a relation between job engagement of employees in a business unit and business-unit outcomes such as profit. Given the importance of its outcomes, organizations should endeavor to increase employees' engagement. One method of fostering engagement would be through increasing employees' psychological safety (Kahn, 1990; May et al., 2004).

Psychological Safety

As previously stated, psychological safety is the feeling that one can act as oneself without fear of negative ramifications (Kahn, 1990). In other words, "it consists of taken-for-granted beliefs about how others will respond when one puts oneself on the line" (Edmondson, 2004, p. 241). Psychological safety has been proposed to encourage help-seeking, feedback-seeking, voicing of concerns, innovation, and extension of communication beyond the immediate team (Edmondson, 2004). Indeed, Walumbwa and Schaubroeck (2009) found that psychological safety mediated the relation between ethical leadership and followers' voice behavior. Additionally, psychological safety mediated the effect of supportive behaviors by supervisors on help seeking and admission of errors by followers (Tynan, 2006).

Most importantly to the present investigation, there is empirical evidence supporting a relation between psychological safety and employee engagement. First, Kahn (1990) asked

workers to describe situations where they were either engaged or disengaged. By coding these incidents, Kahn found that higher levels of psychological safety were more strongly associated with engagement than disengagement. Second, in a field study examining the antecedents of engagement, May et al. (2004) found a significant positive relation between psychological safety and employee engagement. Additionally, the results indicated that psychological safety was the mechanism by which supervisor relations influenced employee engagement. Finally, in a study examining the relation between perceived organizational support and job engagement, Rich et al. (2010) found that organizational support predicted engagement, and suggested that psychological safety might act as a mediator of this relation.

Furthermore, Edmondson (2004) proposed five categories of antecedents to psychological safety: trusting and respectful interpersonal relationships with coworkers, the opportunity to practice new strategies in a non-evaluative setting, supportive organizational contexts, informal workplace dynamics, and leader behavior. In particular, three categories of leader behavior were put forth as antecedents of psychological safety. The first, accessibility, involves leaders making themselves approachable to subordinates and assuming a coaching orientation. The second, inviting input, consists of soliciting feedback from others, seeking others' opinions, and encouraging discussion. The third, modeling openness and fallibility, includes admitting blame for mistakes and setting an example for team members. In sum, leaders who are coaching-oriented, are open to feedback and discussion from subordinates, and model an attitude of openness are likely to encourage psychological safety among their employees (Edmondson, 2004). These antecedents are similar to the contingencies proposed by Owens and Hekman (2012) in their theory of humble leadership. Leaders who are coaching-oriented legitimize the developmental journeys of followers, whereas those who invite input and model an

attitude of openness legitimize followers' uncertainty.

These three leader behaviors (i.e., accessibility, inviting input, and modeling openness and fallibility), described as antecedents of psychological safety, have been combined into a new leadership perspective—inclusive leadership (Nembhard & Edmondson, 2006). Indeed, Carmeli, Reiter-Palmon, and Ziv (2010) found a significant positive relation between this leadership style and employees' subsequent psychological safety. Although humble leadership and inclusive leadership are distinct theories, they do share some characteristics—particularly components of Edmondson's (2004) theory of psychological safety.

Previously, Owens et al. (2013) reported a positive relation between humble leadership and follower engagement. However, there is evidence that the leadership-engagement relation is weak after other factors are controlled, indicating the possibility of a mediating variable (Christian et al., 2011). Trust, a closely related construct to psychological safety, has been proposed as a possible mediator of this relation (Macey & Schneider, 2008). Therefore, given the relations between humble leader behaviors and both psychological safety and employee engagement, the purpose of the present study is to examine these three variables in the context of a mediational model. In the following chapter, the theoretical links between these three constructs are further elucidated, and refined into formal hypotheses.

Chapter II

Rationale and Hypotheses

The three leader behaviors proposed by Edmondson (2004) as antecedents of psychological safety coincide with the three dimensions of humble leader behavior proposed by Owens and Hekman (2012). Edmondson's *inviting input* category of behavior overlaps with the *modeling teachability* dimension of humble leadership, as both involve seeking feedback and listening to follower input. Similarly, the *modeling openness and fallibility* category coincides with the *admitting mistakes* and *modeling teachability* dimensions from Owens and Hekman. They share a sense of openness, owning up to mistakes, and demonstrating tasks and competencies for followers. Edmondson's *accessibility* category does not map as easily onto one of Owens and Hekman's dimensions. However, it could be argued that accessibility and approachability are inherent in all three dimensions of humble leader behavior because these behaviors are aimed at creating open rapport between leaders and subordinates (Owens & Hekman, 2012). Given the similarities between the dimensions of humble leader behavior and the antecedents of psychological safety, it is expected that leader-expressed humility will be positively related to follower perceptions of psychological safety. Carmeli et al. (2010) also found a significant positive relation between inclusive leadership (characterized by openness, accessibility, and availability) and employees' subsequent psychological safety. Although humble leadership and inclusive leadership are distinct theories, they do share some characteristics—particularly components of Edmondson's (2004) theory of psychological safety.

Therefore, it is expected that humble leadership, too, will relate positively to psychological safety.

Hypothesis 1: Leader-expressed humility will be positively related to follower perceptions of psychological safety.

In addition to proposing the three dimensions of humble leader behavior, Owens and Hekman (2012) also put forth several outcomes of humble leadership, one of which is follower engagement. The authors suggested that by matching followers' strengths with tasks, giving decision-making discretion and voice to followers, and encouraging followers' growth and learning, humble leaders would increase follower engagement. This is in line with several of the antecedents of engagement outlined by Saks (2006)—task identity, task significance, autonomy, feedback, and organizational support. Given these connections, humble leadership should positively predict follower engagement. Indeed, an empirical study by Owens et al. (2013) supported this proposition. Therefore, it is expected that this finding will be replicated in the present study.

Hypothesis 2: Leader-expressed humility will be positively related to follower engagement.

Owens and Hekman (2012) also proposed psychological freedom, or psychological safety, as an outcome of humble leadership. Additionally, as previously mentioned, followers' perceptions of leaders as legitimizing followers' developmental journeys and legitimizing uncertainty were proposed to be mechanisms behind this relation. These two mechanisms seem to be more similar to the antecedents of psychological safety than the antecedents of follower engagement. Furthermore, May et al. (2004) found that greater psychological safety was associated with greater follower engagement. It is possible, then, that leader legitimization of

followers' development and uncertainty influences psychological safety, which in turn influences follower engagement. This theory is supported by the finding that after accounting for other factors (e.g., task variety and significance, conscientiousness, and positive affect), there is only a weak relation between leadership and engagement (Christian et al., 2011), indicating the possible role of a mediating variable. Macey and Schneider (2008) proposed that followers' trust in leaders could act as such a mediator. Although not synonymous with psychological safety, trust is a related construct (Edmondson, 2004). Therefore, it is expected that follower perceptions of psychological safety will mediate the relation between leader-expressed humility and follower engagement.

Hypothesis 3: The positive relation between leader-expressed humility and follower engagement will be mediated by follower perceptions of psychological safety.

Chapter III

Method

Participants

Participants were recruited from Amazon's Mechanical Turk (MTurk). MTurk is an online service on which requesters can post human intelligence tasks (HITs), which workers complete in return for a small payment. Given that the present study aimed to study a topic relevant to the greater workforce, it seemed prudent to recruit a sample with more work experience. Furthermore, a recent review of the literature on MTurk concluded that MTurk workers are substantially more representative of the general population than student samples (Barger, Behrend, Sharek, & Sinar, 2011).

Participants had to be at least 18 years old, live in the United States, and have a HIT approval rate of at least 95% to be eligible to participate in this study, but only data from employed participants were used in the analyses. The reasoning for these decisions is threefold. First, the Expressed Humility Scale, the key instrument in this study, was validated on adult samples (Owens et al., 2013). Second, given the nature of the scales, it was necessary that participants be employed, as items asked participants to refer to their current situation at work. Third, although a diverse sample is desirable, limiting participation to individuals living in the United States for the present study avoided the issue of cultural differences. As such, participants were screened after completing the study in order to ensure that the data were from qualified individuals. Data from participants who did not meet the inclusion criteria were discarded. Participants who completed all the required items and passed the quality checks were paid \$0.25

for participating. To determine the number of participants needed to detect an effect if there is one, a power analysis was conducted using Cohen's (1992) guidelines. Based on this power analysis, 85 participants were needed to detect a medium effect size with power set at .80 and alpha set at .05.

In total, 163 individuals completed the survey. Of these, 10 participants failed to pass the quality checks, and another 13 were not currently employed. Prior to data analysis, the responses of those 23 participants were eliminated from the data set, resulting in a final sample size of 140. Overall, 44.3% of participants identified as male, 55.0% identified as female, and 0.7% preferred not to respond. Participants ranged in age from 18 to 70 ($M = 34.66$, $SD = 11.84$). About 77.1% of the sample identified as White or Caucasian, 10.0% as Black or African American, and 12.9% as another ethnic group (e.g., Hispanic or Latino, Asian). In terms of educational background, 60% of the sample had at least a bachelor's degree. All participants in the final sample were currently employed, with 75.7% employed full-time and 24.3% employed part-time.

Measures

Humble leadership. The Expressed Humility Scale, developed and validated by Owens et al. (2013), was used to measure humble leadership in this study (see Appendix A). This 9-item scale was designed to assess three dimensions of humility: viewing oneself accurately, spotlighting followers' strengths and contributions, and modeling teachability (Owens & Hekman, 2012). The instrument used a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) to rate items such as "This person takes notice of others' strengths." Higher scores on this measure were indicative of higher levels of leader humility. The procedure for scoring was similar to Owens et al. (2013). Thus, the overall score for the scale was obtained by averaging the scores from the nine items.

To assess reliability, Owens et al. (2013) administered the scale to a sample of 164 undergraduate business students (85 men, 79 women, $M_{\text{age}} = 21.0$ years). Analysis yielded an internal consistency reliability of $\alpha = .94$. The scale was also administered to a sample of 511 employees from a large health care organization (322 men, 189 women, $M_{\text{age}} = 48.0$ years). Internal consistency reliability for this work sample was $\alpha = .95$. This reliability coefficient was nearly identical to the reliability coefficient obtained from the student sample (i.e., .94). The developers felt that these pieces of evidence, taken together, provided sufficient evidence of the scale's reliability. This conclusion was further supported by the present study, in which internal consistency reliability was $\alpha = .95$.

Employee engagement. The Job Engagement Scale (JES) was used to measure employee engagement (see Appendix B). Rich et al. (2010) developed the JES to measure Kahn's (1990) three dimensions of engagement: physical, cognitive, and affective. The scale developers used items from existing scales, as well as created a few items, in order to fully assess these three dimensions. The JES is an 18-item instrument, measured on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*), where a higher score is representative of a higher level of engagement. The items (e.g. "I am enthusiastic in my job") are divided according to the three facets of engagement: six items for physical, six items for cognitive, and six items for affective.

Rich et al. (2010) used data from a sample consisting of employed individuals from various occupations and organizations to assess the reliability of the JES. Internal consistency reliability for the overall JES was $\alpha = .95$. Internal consistency reliabilities for each of the three subscales (i.e., cognitive, affective, and physical) ranged from $\alpha = .89$ to $\alpha = .94$. These findings indicate that the JES and its subscales are highly internally consistent. Indeed, in the current study, internal consistency reliability for the JES was $\alpha = .96$.

Using an exploratory factor analysis, Rich et al. (2010) found that employee engagement had three factors, aligning with the cognitive, affective, and physical dimensions of engagement proposed by Kahn (1990). However, strong inter-dimension correlations and the high internal consistency reliability reported previously supported the use of an aggregate, overall scale. Two confirmatory factor analyses yielded similar results. As such, it was concluded that there are three first-order dimensions of engagement that then load onto a second-order engagement dimension. Therefore, the JES is a valid measure of both overall employee engagement and individual aspects of engagement. However, the current study focused on overall employee engagement rather than on the three facets.

Psychological safety. Edmondson's (1999) team psychological safety scale was used to measure psychological safety (see Appendix C). Edmondson developed the scale based on qualitative interviews with employees in a manufacturing company. The end result was a seven-item instrument including items such as "It is safe to take risks in this organization." The original version of Edmondson's scale focused on psychological safety in teams. For the purposes of the current study, items were altered to reflect psychological safety in organizations, rather than in work teams. Items were assessed using a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). Higher scores on this measure indicate greater psychological safety. The present study aimed to examine psychological safety at the individual level, as opposed to the group level. Previous research has aggregated individuals' total scores in order to derive a group-level indicator of psychological safety (Edmondson, 1999; Walumbwa & Schaubroeck, 2009). However, for the purposes of this study, scores on the seven items were simply aggregated in order to determine individual-level psychological safety.

A sample of 427 employees of the manufacturing company, belonging to 51 teams,

completed a survey that included Edmondson's (1999) measure of psychological safety. Based on this sample, a measure of internal consistency reliability yielded $\alpha = .82$. In another study, internal consistency reliability reached $\alpha = .86$ (Walumbwa & Schaubroeck, 2009). In the current study, internal consistency reliability was $\alpha = .83$. These data indicate evidence for adequate reliability of the instrument.

Quality checks. Two quality checks were built into the survey to ensure that participants were paying attention, and participants were asked to select either "Agree" or "Disagree." These items were interspersed among the humble leadership and psychological safety scale items to make them more difficult to identify.

Demographics. Demographic information was collected at the end of the survey. See Appendix D for a complete list of demographic items.

Procedure

Prior to data collection, the study was submitted to the Xavier University Institutional Review Board (IRB) for review. Following IRB approval (see Appendix E), participants were recruited using a posting on MTurk, where the link to the online survey was provided on the MTurk interface (see Appendix F). Qualtrics, an online survey software, was used to collect data. To protect participants' privacy, the Qualtrics setting allowing for collection of IP addresses was disabled prior to launching the survey. Informed consent was obtained at the beginning of the survey (see Appendix G), at which time participants had the opportunity to refuse participation. If participants agreed to the terms of the study, they proceeded to the study by clicking "Next." Then, participants completed the Expressed Humility Scale, the JES, and Edmondson's (1999) psychological safety scale. This order of scales was counterbalanced to reduce any possible sequence effects. Specifically, reverse counterbalancing was used, such that participants

completed either the Expressed Humility Scale or Edmondson's (1999) psychological safety scale first. Of note, participants were asked to refer to their immediate supervisor at work while completing the Expressed Humility Scale. After completing these three scales, participants were asked to complete the demographics form. Three pieces of demographic information, namely age, country of residence, and employment status were used to confirm participants' eligibility for the study. Additionally, two quality checks were included in the survey to ensure that participants were paying attention. When participants submitted their responses, they were given a debriefing form (see Appendix H). Participants who either provided demographic information that precluded eligibility or failed the quality checks were excluded from data analysis. After completing the survey, participants who completed all of the required items and passed the quality checks received a \$0.25 payment via MTurk.

Chapter IV

Results

The purpose of the present study was to examine the influence of humble leadership on follower-level outcomes and to test these variables in a mediational model. Hypothesis 1 and Hypothesis 2 proposed significant positive relations between humble leadership and both psychological safety and followers' engagement. These hypotheses were tested by finding Pearson's r . In support of Hypothesis 1, humble leadership was significantly correlated with psychological safety, $r(138) = .64, p < .001$. Furthermore, in support of Hypothesis 2, a significant correlation was found between humble leadership and follower engagement, $r(138) = .25, p = .002$.

Hypothesis 3 proposed that psychological safety would have a mediating role in the aforementioned relation between humble leadership and employee engagement. This hypothesis was tested using Baron and Kenny's (1986) method of determining mediation, which requires that four conditions be met in order to detect a mediating relation. First, the predictor must be significantly related to the mediator. Second, the predictor must be significantly related to the criterion. Third, the mediator must be significantly related to the criterion. Fourth, to establish perfect mediation, the relation between the predictor and the criterion should not be significant after controlling for the mediator. Hypotheses 1 and 2 accounted for the first two conditions. As discussed above, there were significant correlations between humble leadership and both psychological safety and follower engagement.

The third and fourth conditions were simultaneously tested using hierarchical linear regression. Employee engagement was regressed on humble leadership and psychological safety, with psychological safety entered in the first step and humble leadership entered in the second step. The first step showed that psychological safety significantly predicted employee engagement ($\beta = .41, p < .001$), fulfilling Baron and Kenny's (1986) third condition. The fourth condition was assessed in the second step of the hierarchical linear regression. When humble leadership was entered in the second step, controlling for psychological safety, the previously significant relation between humble leadership and follower engagement became non-significant ($\beta = -.03, p = .783$). According to Baron and Kenny, there is evidence for perfect mediation if there is no effect of the predictor after the mediator is controlled. As such, the final condition of establishing mediation was met, and Hypothesis 3 was supported. Please see Table 1 for the hierarchical linear regression results. These results provide evidence for the mediating role of psychological safety in the relation between humble leadership and employee engagement.

Table 1

Hierarchical Linear Regression: Testing the Mediation Model

	Variable	<i>b</i>	SE(<i>b</i>)	β	ΔR^2
Step 1					.17*
	Psychological Safety	.42*	.08	.41*	
Step 2					.00
	Psychological Safety	.44*	.10	.43*	
	Humble Leadership	-.02	.08	-.03	

Note. *N* = 140.**p* < .001.

Chapter V

Discussion

The purpose of the present study was to examine humble leadership, a relatively new construct in the leadership literature, and its impact on follower-level outcomes. In particular, the study targeted the mechanism by which humble leadership influences employee engagement, a relation previously reported by Owens et al. (2013). Given the existing theoretical and empirical links among the three constructs, a mediational model was proposed, in which psychological safety mediated the relation between humble leadership and follower engagement. This model was supported, with the data providing evidence for perfect mediation. Thus, this pattern of results indicated that psychological safety may serve as a key mechanism by which leader-expressed humility fosters employee engagement in followers.

As previously discussed, leader-expressed humility fosters both psychological safety and work engagement in followers (e.g., Owens & Hekman, 2012; Owens et al., 2013). This is because the actions that characterize humble leadership coincide with the antecedents of both constructs. Thus, when leaders exhibit humility, they are creating conditions in which followers can feel psychologically safe and engaged. Owens and Hekman (2012) proposed that there were two mechanisms behind these relations—followers' perceptions of leaders as legitimizing developmental journeys and as legitimizing uncertainty.

However, although Owens and Hekman (2012) suggested that these mechanisms influence both psychological freedom (or safety) and employee engagement, it seems that the more direct influence would be on psychological freedom. According to Owens and Hekman,

followers perceive that development is legitimized when leaders emphasize that making mistakes is a normal and important part of development. Similarly, they suggested that leaders legitimize uncertainty by emphasizing that feeling unsure is normal and by encouraging employees to vocalize uncertainty. Rather than coinciding with employee engagement, these two outcomes align with psychological safety, in that they increase the feeling that one can act as oneself without fear of negative ramifications (Kahn, 1990). Thus, the more direct influence of humble leadership should be on psychological safety, rather than employee engagement. Therefore, leader-expressed humility fosters psychological safety, which in turn leads to greater follower engagement, as demonstrated by May et al. (2004). The present study supported this notion because findings suggested that psychological safety fully mediated the relation between humble leadership and follower engagement.

Theoretical Implications

This study has several theoretical implications. First, it reinforced existing findings regarding the links between humble leadership and employee engagement, as well as psychological safety and employee engagement (Kahn, 1990; May et al., 2004; Owens et al., 2013). Although a multitude of studies have examined the relation between leadership and engagement (e.g., Christian et al., 2011; Zhu, Avolio, & Walumbwa, 2009), this is only the second study, following Owens et al. (2013), to investigate humble leadership specifically. Therefore, replicating the finding of a significant, positive relation between humble leadership and employee engagement is an important step in building the humble leadership literature.

Second, this study identified a new link between humble leadership and psychological safety. Owens and Hekman (2012) had previously suggested a relation between humble leadership and psychological freedom, a construct similar to psychological safety. Indeed, the

categories of leader behaviors proposed by Edmondson (2004) as antecedents of psychological safety (i.e., inviting input, modeling openness and fallibility, and accessibility) are similar to Owens and Hekman's categories of humble leader behaviors (i.e., acknowledging limitations and mistakes, recognizing followers' strengths and contributions, and modeling teachability). However, the proposed relation had not been tested. Thus, the present study provided empirical support to the theory put forth by Owens and Hekman.

Finally, by examining a mediational model, this study demonstrated that the influence of humble leadership on employee engagement seems to be through psychological safety. This finding is important for two reasons. The first is that it adds to the literature on psychological safety, reinforcing its worth as an important mediating variable and predictor of organizational outcomes. The second reason is that these findings filled a research gap identified by Owens et al. (2013). Those authors called on future research to further explore the effects of expressed humility, including individual-level outcomes. This study answered that call by providing a mechanism by which humble leadership may influence employee engagement, thereby contributing to Owens and Hekman's (2012) theory of humble leadership.

Practical Implications

However, the importance of these findings is not solely theoretical. Organizations have been giving an unprecedented amount of attention to leadership and employee engagement. According to Deloitte's Global Human Capital Trends Report (Deloitte Consulting LLP & Bersin by Deloitte, 2014), 79% of respondents in a global survey of business and human resources leaders viewed retention and engagement as an "urgent" or "important" matter. Additionally, 86% rated leadership as "urgent" or "important." Still, only 17% and 15% of respondents rated their organization as capable of or ready to address the issues of engagement

and leadership, respectively. Therefore, there is a capability gap to be filled.

The present study addressed both of these issues (i.e., leadership and engagement), integrating them into a single model whereby greater leader humility was associated with higher employee engagement. This means that organizations could potentially tackle the issue of low employee engagement by incorporating humility into leadership trainings and encouraging leaders to exhibit humility in their interactions with subordinates. However, Owens and Hekman (2012) mentioned sincerity as a contingency to their humble leadership theory, proposing that leaders who are perceived to be faking humility do not benefit from that humility in the same way as those who are sincere. Therefore, it would also be worth examining the potential of leader humility as a criterion in employee selection. If insincere humility is perceived negatively, it might be better to hire leaders already in possession of humility rather than attempt to develop humility in existing leaders. Due to these reasons, humble leadership and employee engagement deserve greater attention in both the research and applied domains.

Although engagement is certainly a desirable outcome, perhaps more attention should also be given to its antecedents. This study demonstrated that psychological safety, a construct not typically given much attention, has an important role in the engagement of employees. Specifically, results suggested that leader-expressed humility does not seem to directly influence work engagement; instead, it acts through the influence of psychological safety. With that finding, there is potential for organizations to use a measure of psychological safety, such as Edmondson's (1999) scale, as a diagnostic tool within their workforce and as an intermediate step towards increased engagement. A psychological safety scale could be administered along with an employee engagement scale in order to assess an important antecedent of engagement. If psychological safety can be identified as a problem area, organizations can then design

interventions aimed at creating a psychologically safe environment. Additionally, a focus on psychological safety could help both leaders and followers better understand what influences employee engagement. Specifically, as previously stated, psychological safety seems to provide a mechanism by which leaders' behaviors, particularly humble behaviors, influence their followers' engagement with their work.

Limitations and Future Research Directions

The present study was not without limitations. First, although MTurk provided easy access to a sample of workers, the researcher had no control over the study conditions and no way of verifying participants' eligibility for the study. For instance, it is possible that MTurk workers falsely identified themselves as employed, thus deceptively completing the study. However, because participants who were not employed at the time of data collection still received compensation if they completed all required items and passed the quality checks, it was not expected that they provided false information regarding current employment. An alternative to MTurk would have been the Xavier University participant pool. However, as many college students lack employment, the Xavier University participant pool did not constitute a viable sample. Additionally, the participant pool likely lacks the diversity of an MTurk sample. As stated previously, Barger et al. (2011) determined that MTurk workers were significantly more representative of the overall population than were student samples. Therefore, given the necessity of surveying employed adult participants, MTurk seemed to be the ideal tool for recruiting participants.

Despite the necessity of using MTurk instead of the participant pool to recruit participants, there is still a risk of bias in the sample. Although MTurk workers are more representative than student samples, there is also evidence that they differ from community and

student populations in terms of certain personality traits (Barger et al., 2011; Goodman, Cryder, & Cheema, 2012). Specifically, research has shown that MTurk workers are less extraverted, less emotionally stable, and have lower self-esteem than student and community samples (Goodman et al., 2012). These traits have previously been linked to follower preferences for certain leadership styles. For example, follower self-esteem was positively related to preference for charismatic leadership, while followers high in extraversion preferred transformational leadership (Ehrhart & Klein, 2001; Felfe & Schyns, 2006). It is possible that such differences in leadership preferences extend to the MTurk population, thus influencing the results of the current study of humble leadership. As such, it is important for the findings of this study to be replicated, particularly in organizational settings.

Another potential limitation was the target level addressed by each of the measures. The targets of the humble leadership and employee engagement measures are at the individual level, whereas the target of the psychological safety measure is at the organizational level. However, even though the targets of the measures may differ, they all used the same individual level of analysis. Specifically, the instructions for each measure asked participants to provide their individual perceptions of those targets (i.e., their supervisor and organization). Therefore, although the targets differed, the level of analysis remained the same, suggesting that this should not have been a limitation.

Additionally, there are situational factors and individual differences that could affect the observed mediational model but were not measured in the current study. Owens and Hekman (2012) addressed some of these situational factors while discussing contingencies related to their model of humble leadership. For example, in times of stress and pressure, followers perceived humble leaders who modeled teachability as unwilling to lead and take responsibility for the

situation. Furthermore, in organizations that are high in hierarchical adherence or that lack a learning culture, humility is less likely to be a successful leadership style (Owens & Hekman, 2012). Owens and Hekman also discussed individual differences in leaders as a contingency that could affect the strength of humility's influence on outcomes such as follower engagement and psychological freedom. Specifically, they proposed that when a leader is perceived as incompetent or insincere, humility could actually hinder that leader's success. Finally, in addition to the contingencies proposed by Owens and Hekman, there are subordinate individual differences that could potentially affect whether followers view leader humility as a strength or a weakness. Such individual differences include tolerance for ambiguity, goal orientation, personality traits (e.g., openness to experience), and individual needs (e.g., need for achievement). For instance, it might be that a subordinate with a learning goal orientation rather than a performance goal orientation would prefer humble leaders because of their willingness to listen to followers' opinions and their focus on follower development. Future research should explore these situational factors and individual differences in order to better understand the circumstances in which humility would be an effective leadership style. It is possible that these constructs could act as moderators within the model examined in the current study.

Two final limitations were the use of self-report data and common method variance. As with any self-report measure, there is concern over the influence of the social desirability bias on participants' scores. However, given the reliability and validity evidence for the JES and Edmondson's (1999) psychological safety scale, it seemed reasonable to proceed with their use, despite this particular concern. Common method variance is another potential problem for the current study due to its cross-sectional nature (Spector, 1994). Common method variance can exacerbate concerns regarding self-report data, as separating trait variance from method variance

is nearly impossible. It is possible that correlations discovered were due to method variance as opposed to variance due to the constructs themselves. Nevertheless, it has been argued that common method variance may not be very problematic in organizational research (e.g., Lance, Dawson, Birkelbach, & Hoffman, 2010). Moreover, cross-sectional self-report methodology can be useful for providing initial insight into the relations of interest; the significant findings of the present study lead the way for the use of more rigorous methodologies to further refine hypotheses and replicate findings (Spector, 1994). As such, despite the limitations of this study, findings provided a foundation and direction for further research into the relations among humble leadership, psychological safety, and employee engagement.

Conclusions

This study supported the hypothesis that psychological safety would mediate the relation between humble leadership and employee engagement. In doing so, it contributed to the literature on the emerging theory of humble leadership and provided a mechanism by which leader humility may affect an important organizational outcome, namely employee engagement. By acknowledging limitations and mistakes, recognizing followers' strengths and contributions, and modeling teachability, leaders can create an environment in which followers can act without fear of negative ramifications and can fully engage in their work.

Chapter VI

Summary

Humble Leadership: Implications for Psychological Safety and Follower Engagement

Research has theoretically and empirically explored the relations between leadership and follower engagement (Christian, Garza, & Slaughter, 2011), leader behaviors and psychological safety (Edmondson, 2004), and psychological safety and follower engagement (May, Gilson, & Harter, 2004). However, the literature has not examined the three constructs in a mediational model, particularly in the context of humble leadership. Therefore, the purpose of this study was to empirically test the hypothesis that psychological safety mediates the relation between humble leadership and follower engagement.

Humble Leadership

Humility has been defined by positive psychologists as “letting one’s accomplishments speak for themselves; not seeking the spotlight; [and] not regarding oneself as more special than one is” (Peterson, 2006, p. 144). Recently, focus has turned toward humility as an important characteristic of effective leadership (Owens & Hekman, 2012). This focus on humility is paralleled by a discussion of humility in existing leadership theories, such as Level 5 leadership, authentic leadership, and transformational leadership (Collins, 2001; May et al., 2013; Stone, Russell, & Patterson, 2003). However, although aspects of humility were present in these perspectives, none of them agreed on a definition of humility or specifically emphasized humility as the determinant of successful leadership.

In response to the aforementioned problems, a recent line of research sought to clarify the

definition of humility, to develop a psychometrically sound tool for the measurement of humility, and to explore the utility of humility in the context of leadership (Owens, 2009; Owens et al., 2011; Owens & Hekman, 2012; Owens, Johnson, & Mitchell, 2013). These studies culminated in the definition of expressed humility as “an interpersonal characteristic that emerges in social contexts that connotes (a) a manifested willingness to view oneself accurately, (b) a displayed appreciation of others’ strengths and contributions, and (c) teachability” (Owens et al., 2013, p. 1518). In addition, Owens and Hekman (2012) were able to develop a model of humble leadership, including its mechanisms, contingencies, and outcomes.

Humble leader behaviors and contingencies. The first category of humble leader behaviors—acknowledging limitations and mistakes—included admitting errors, acknowledging deficits in experience or knowledge, and taking responsibility for failures. However, the effectiveness of these behaviors was contingent on the leader’s competence; humility was perceived as weakness in leaders who were not viewed as competent. The second category involved recognizing followers’ strengths and contributions. Here, leaders displayed appreciation for subordinates’ contributions, acknowledged followers’ strengths, and referred to the team when talking about successes. However, the effectiveness of these behaviors was contingent on followers’ perceptions of leaders’ sincerity. False humility fostered suspicion and contempt in followers. The third category of humble leader behaviors concerned modeling teachability. This category of behaviors included openness toward learning, modeling tasks for followers, seeking feedback, listening, and considering alternative perspectives. However, there were also three contingencies associated with this category. Humble leadership was not perceived as effective in situations involving time pressure or threat, when organizational culture was not conducive to humility, or when the organization was high in hierarchical adherence (Owens et al., 2013).

Follower perceptions as a mechanism. Owens and Hekman (2012) suggested that two types of follower perceptions acted as mechanisms within the model. The first follower perception was legitimizing followers' developmental journeys. By displaying humble behavior, leaders fostered a development orientation and demonstrated that it was acceptable to make mistakes. The second follower perception was of the leader legitimizing uncertainty. This referred to the leader validating followers' uncertainty and encouraging a learning environment. These two types of perceptions were proposed as the mechanism through which humble leadership influences follower outcomes.

Outcomes. Humble leadership was proposed to be associated with four outcomes: fluidity of organizing, continuous small change, follower engagement, and psychological freedom. Specifically, the model suggested that followers' perceptions of the leader legitimizing uncertainty enabled the team to transition between structures in response to changing situations and fostered a preference for small, continuous changes over large, infrequent changes. Additionally, followers' perception of the leader legitimizing their developmental journeys was posited to lead to greater employee engagement and psychological freedom. In essence, humble leaders created a safe environment for employees and motivated them to exhibit their best performance (Owens & Hekman, 2012). Using the newly developed Expressed Humility Scale, Owens and colleagues (2013) provided some empirical support for these outcomes. Of particular interest to the present study, leader humility predicted follower engagement.

Employee Engagement

The most enduring definition of engagement came from Kahn's (1990) framework of personal engagement and disengagement. Personal engagement was defined as "the harnessing of organizational members' selves to their work roles" (Kahn, 1990, p. 694) and was

characterized by full utilization of physical, cognitive, and emotional resources. In personal disengagement, on the other hand, “people withdraw and defend themselves physically, cognitively, and emotionally during role performance” (Kahn, 1990, p. 694).

This framework of engagement, first proposed by Kahn (1990) and later empirically supported by May et al. (2004), suggests that engagement has three antecedents: meaningfulness, safety, and availability. Psychological meaningfulness refers to the degree to which an individual believes that his or her job has value in the context of the individual’s beliefs and ideals (Renn & Vandenberg, 1995). Psychological safety is the feeling that one can act as oneself without fear of negative ramifications (Kahn, 1990). Finally, psychological availability refers to the extent to which an individual believes that he or she possesses the physical, cognitive, or emotional resources needed to engage at work (Kahn, 1990). Additionally, Saks (2006) identified several other predictors of engagement that are relevant to the present research: organizational support, procedural justice, and job characteristics—skill variety, task identity, task significance, autonomy, and feedback.

Psychological Safety

Importantly to the present study, there is empirical evidence of a positive relation between psychological safety and employee engagement (Kahn, 1990; May et al., 2004). As previously stated, psychological safety is the feeling that one can act as oneself without fear of negative ramifications (Kahn, 1990). Edmondson (2004) proposed five categories of antecedents to this construct: trusting and respectful interpersonal relationships with coworkers, the opportunity to practice new strategies in a non-evaluative setting, supportive organizational contexts, informal workplace dynamics, and leader behavior. In particular, three categories of leader behavior were put forth as antecedents. The first, accessibility, involves leaders making

themselves approachable to subordinates and assuming a coaching orientation. The second, inviting input, consists of seeking others' opinions and encouraging discussion. The third, modeling openness and fallibility, includes admitting blame for mistakes and setting an example for team members. In sum, leaders who are coaching-oriented, are open to feedback and discussion from subordinates, and model an attitude of openness are likely to encourage psychological safety among their employees (Edmondson, 2004).

Hypotheses

The three leader behaviors proposed by Edmondson (2004) as antecedents of psychological safety coincide with the three dimensions of humble leader behavior proposed by Owens and Hekman (2012). Edmondson's *inviting input* category of behavior overlaps with the *modeling teachability* dimension of humble leadership, as both involve seeking feedback and listening to follower input. Similarly, the *modeling openness and fallibility* category coincides with the *admitting mistakes* and *modeling teachability* dimensions from Owens and Hekman. They share a sense of openness, owning up to mistakes, and demonstrating tasks and skills competency for followers. Edmondson's *accessibility* category does not map as easily onto one of Owens and Hekman's dimensions. However, it seems that accessibility and approachability are inherent in all three dimensions of humble leader behavior because these behaviors are aimed at creating open rapport between leaders and subordinates (Owens & Hekman, 2012). These similarities provide the rationale for the first hypothesis.

Hypothesis 1: Leader-expressed humility will be positively related to follower perceptions of psychological safety.

In addition to proposing the three dimensions of humble leader behavior, Owens and Hekman (2012) put forth several outcomes of humble leadership, one of which is follower

engagement. The authors suggested that by matching followers' strengths with tasks, giving decision-making discretion and voice to followers, and encouraging followers' growth and learning, humble leaders would increase follower engagement. This is in line with several of the antecedents of engagement outlined by Saks (2006)—task identity, task significance, autonomy, feedback, and organizational support. Given these connections, humble leadership should positively predict follower engagement. Indeed, an empirical study by Owens et al. (2013) supported this proposition. Therefore, it is expected that this finding will be replicated.

Hypothesis 2: Leader-expressed humility will be positively related to follower engagement.

Owens and Hekman (2012) also proposed psychological freedom, or psychological safety, as an outcome of humble leadership. Additionally, followers' perceptions of leaders as legitimizing followers' developmental journeys and legitimizing uncertainty were proposed to be mechanisms behind this relation. These two mechanisms seem to be more similar to the antecedents of psychological safety than the antecedents of follower engagement. Furthermore, May et al. (2004) found that greater psychological safety was associated with greater follower engagement. It is possible, then, that leader legitimization of followers' development and uncertainty influences psychological safety, which in turn influences follower engagement. This theory is supported by the finding that after accounting for other factors (e.g., task variety and significance, conscientiousness, and positive affect), there is only a weak relation between leadership and engagement (Christian et al., 2011), indicating the possible role of a mediating variable. Macey and Schneider (2008) proposed that followers' trust in leaders could act as such a mediator. Although not synonymous with psychological safety, trust is a related construct (Edmondson, 2004). Therefore, it is expected that follower perceptions of psychological safety

will mediate the relation between leader-expressed humility and follower engagement.

Hypothesis 3: The positive relation between leader-expressed humility and follower engagement will be mediated by follower perceptions of psychological safety.

Method

Participants

Participants were recruited from Amazon's Mechanical Turk (MTurk). Participants had to be at least 18 years old, live in the United States, and have a HIT approval rate of at least 95% to be eligible to participate in this study. Participants who completed all required items and passed the quality checks were paid \$0.25. In total, 163 individuals completed the survey. Of these, 10 participants failed to pass the quality checks, and another 13 were not currently employed. Prior to data analysis, the responses of those 23 participants were eliminated from the data set, resulting in a final sample size of 140. Overall, 44.3% of participants identified as male, 55.0% identified as female, and 0.7% preferred not to respond. Participants ranged in age from 18 to 70 ($M = 34.66$, $SD = 11.84$). About 77.1% of the sample identified as White or Caucasian, 10.0% as Black or African American, and 12.9% as another ethnic group. In terms of educational background, 60% of the sample had at least a bachelor's degree. All participants in the final sample were currently employed, 75.7% full-time and 24.3% part-time.

Measures

Humble leadership. The Expressed Humility Scale, developed by Owens et al. (2013), was used to measure humble leadership. The instrument used a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) to rate items such as "This person takes notice of others' strengths." Higher scores on this measure were indicative of higher levels of leader humility. Similar to Owens et al. (2013), the overall score for the scale was obtained by averaging the

scores from the nine items. Internal consistency reliability for this scale was $\alpha = .95$.

Employee engagement. The Job Engagement Scale (JES), an 18-item instrument developed by Rich et al. (2010), was used to measure engagement. The measure uses a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*), where a higher score is representative of a higher level of engagement. The items (e.g. “I am enthusiastic in my job”) are divided according to Kahn’s (1990) three facets of engagement: six items for physical, six items for cognitive, and six items for affective. Rich et al. found that the JES is a valid measure of both overall employee engagement and individual aspects of engagement. In the current study, the focus was on overall employee engagement, and internal consistency reliability was $\alpha = .96$.

Psychological safety. Edmondson’s (1999) team psychological safety scale was used to measure psychological safety. For the purposes of the current study, items were altered to reflect psychological safety in organizations, rather than in work teams. The seven items (e.g., “It is safe to take risks in this organization,”) were assessed using a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). Higher scores on this measure indicate greater psychological safety. In the present study, scores on the seven items were aggregated in order to determine individual-level psychological safety. Internal consistency reliability was $\alpha = .83$.

Quality checks. Two quality checks were built into the survey to ensure that participants were paying attention, and participants were asked to select either “Agree” or “Disagree.” These items were interspersed among the humble leadership and psychological safety scale items.

Demographics. Demographic information was collected at the end of the survey.

Procedure

Participants were recruited using a posting on MTurk, which linked to a Qualtrics survey. Informed consent was obtained at the beginning of the survey, at which time participants had the

opportunity to refuse participation. Participants then completed the Expressed Humility Scale, the JES, and Edmondson's (1999) psychological safety scale. While completing the Expressed Humility Scale, participants were asked to refer to their immediate supervisor at work. The order of scales was counterbalanced to reduce any possible sequence effects. Specifically, reverse counterbalancing was used, such that participants completed either the Expressed Humility Scale or Edmondson's (1999) psychological safety scale first. After completing these three scales, participants were asked to complete the demographics form. After participants submitted their responses, they were debriefed.

Results

Hypothesis 1 and Hypothesis 2, proposing significant positive relations between humble leadership and both psychological safety and followers' engagement, were tested by finding Pearson's r . In support of Hypothesis 1, humble leadership was significantly correlated with psychological safety, $r(138) = .64, p < .001$. Furthermore, in support of Hypothesis 2, humble leadership and follower engagement were significantly correlated, $r(138) = .25, p = .002$.

Hypothesis 3 proposed that psychological safety would have a mediating role in the aforementioned relation between humble leadership and employee engagement. This hypothesis was tested using the Baron and Kenny (1986) method, which requires that four conditions be met in order to detect a mediating relation. First, the predictor must be significantly related to the mediator. Second, the predictor must be significantly related to the criterion. Third, the mediator must be significantly related to the criterion. Fourth, to establish perfect mediation, the relation between the predictor and the criterion should not be significant after controlling for the mediator. The significant results for Hypotheses 1 and 2 satisfied the first two conditions.

The third and fourth conditions were simultaneously tested using hierarchical linear

regression. Employee engagement was regressed on humble leadership and psychological safety, with psychological safety entered in the first step and humble leadership entered in the second step. In the first step, psychological safety significantly predicted employee engagement ($\beta = .41$, $p < .001$), fulfilling Baron and Kenny's (1986) third condition. When humble leadership was entered in the second step, controlling for psychological safety, the previously significant relation between humble leadership and follower engagement became non-significant ($\beta = -.03$, $p = .783$). As such, the final condition of establishing mediation was met, and Hypothesis 3 was supported. These results provide evidence for the mediating role of psychological safety in the relation between humble leadership and employee engagement.

Discussion

Leader-expressed humility fosters both psychological safety and work engagement in followers (e.g., Owens & Hekman, 2012; Owens et al., 2013). This is likely due to the alignment of humble leadership with the antecedents of both constructs. However, Owens and Hekman (2012) suggested that there were two mechanisms behind these relations—followers' perceptions of leaders as legitimizing developmental journeys and as legitimizing uncertainty. Although Owens and Hekman (2012) suggested that the two mechanisms influence both psychological freedom (or safety) and employee engagement, it seems that the more direct influence is on psychological freedom. This is because both mechanisms increase the feeling that one can act as oneself without fear of negative ramifications (Kahn, 1990). Therefore, leader-expressed humility fosters psychological safety, which in turn leads to greater follower engagement, as demonstrated by May et al. (2004). The results of the present study supported this notion because findings suggested that psychological safety fully mediated the relation between humble leadership and follower engagement.

Theoretical and Practical Implications

This study has several theoretical implications. First, it reinforced existing findings regarding the links between humble leadership and employee engagement, as well as psychological safety and employee engagement (Kahn, 1990; May et al., 2004; Owens et al., 2013). Second, this study identified a new link between humble leadership and psychological safety. Finally, by examining a mediational model, this study demonstrated that the influence of humble leadership on employee engagement seems to be through psychological safety. This finding is important because it adds to the literature on psychological safety and fills a research gap identified by Owens et al. (2013), who called on future research to further explore the individual-level outcomes of expressed humility.

However, the importance of these findings is not solely theoretical. Organizations have been giving an unprecedented amount of attention to leadership and employee engagement (Deloitte Consulting LLP & Bersin by Deloitte, 2014). The results of the present study suggest that these concepts are related. As such, organizations could potentially tackle the issue of low employee engagement by developing humility in their leaders. Additionally, because Owens and Hekman (2012) cited sincerity as a contingency to the success of humble leadership, it would also be worth examining the potential of leader humility as a criterion in employee selection. Additionally, although engagement is certainly a desirable outcome, perhaps more attention should also be given to its antecedents. With the finding that psychological safety is related to engagement, there is potential for organizations to use Edmondson's (1999) scale as a diagnostic tool to identify problem areas and to help both leaders and followers better understand what influences employee engagement.

Limitations and Future Research Directions

The present study was not without limitations. First, there are situational factors and individual differences that could affect the observed mediational model, but were not measured in the current study. Owens and Hekman (2012) addressed some of these while discussing contingencies related to their model of humble leadership. In particular, future research should examine the influences of situational time pressure, hierarchical adherence within the organization, and leader competence and sincerity on the observed relations. Furthermore, in addition to the contingencies proposed by Owens and Hekman, there are subordinate individual differences that could potentially affect how followers view leader humility. Such individual differences include tolerance for ambiguity, goal orientation, personality traits (e.g., openness to experience), and individual needs (e.g., need for achievement). Future research should explore these situational factors and individual differences, because they could act as moderators within the model examined in the current study.

Three additional limitations were the use of MTurk to recruit participants, the use of self-report data, and common method variance. First, although MTurk provided easy access to a sample of workers, the researcher had no control over the study conditions and no way of verifying participants' eligibility. Second, as with any self-report measure, there is concern over the influence of the social desirability bias. However, given the reliability and validity evidence for the JES and Edmondson's (1999) psychological safety scale, it seemed reasonable to proceed with their use. Finally, common method variance is another potential problem for the current study due to its cross-sectional nature (Spector, 1994). Nevertheless, it has been argued that common method variance may not be very problematic in organizational research (e.g., Lance, Dawson, Birkelbach, & Hoffman, 2010). Moreover, cross-sectional self-report methodology can

be useful for providing initial insight into the relations of interest (Spector, 1994). As such, despite the limitations of this study, findings provided a foundation and direction for further research into the relations among humble leadership, psychological safety, and employee engagement.

Conclusions

This study supported the hypothesis that psychological safety would mediate the relation between humble leadership and employee engagement. In doing so, it added to the literature on the emerging theory of humble leadership and provided a mechanism by which leader humility may affect an important organizational outcome, namely employee engagement. By acknowledging limitations and mistakes, recognizing followers' strengths and contributions, and modeling teachability, leaders can create an environment in which followers can act without fear of negative ramifications and can fully engage in their work.

References

- Barger, P., Behrend, T. S., Sharek, D. J., & Sinar, E. F. (2011). I-O and the crowd: Frequently asked questions about using Mechanical Turk for research. *The Industrial-Organizational Psychologist*, 49(2), 11-17.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182. doi: 10.1037/0022-3514.51.6.1173
- Carmeli, A., Reiter-Palmon, R., & Ziv, E. (2010). Inclusive leadership and employee involvement in creative tasks in the workplace: The mediating role of psychological safety. *Creativity Research Journal*, 22, 250-260. doi: 10.1080/10400419.2010.504654
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64, 89-136. doi: 10.1111/j.1744-6570.2010.01203.x
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159. doi: 10.1037/0033-2909.112.1.155
- Collins, J. (2001). Level 5 leadership: The triumph of humility and fierce resolve. *Harvard Business Review*, 79, 67-79.
- Deloitte Consulting LLP, & Bersin by Deloitte. (2014). *Global human capital trends 2014: Engaging the 21st-century workforce*. Retrieved from Deloitte University Press website: <http://dupress.com/periodical/trends/global-human-capital-trends-2014/?icid=hp:ft:01>
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44, 350-383. doi: 10.2307/2666999

- 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, NY: Russell Sage Foundation.
- Ehrhart, M. G., & Klein, K. J. (2001). Predicting followers' preferences for charismatic leadership: The influence of follower values and personality. *The Leadership Quarterly*, 12, 153-179. doi: 10.1016/S1048-9843(01)00074-1
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160. doi: 10.3758/BRM.41.4.1149
- Felfe, J., & Schyns, B. (2006). Personality and the perception of transformational leadership: The impact of extraversion, neuroticism, personal need for structure, and occupational self-efficacy. *Journal of Applied Social Psychology*, 36, 708-739. doi: 10.1111/j.0021-9029.2006.00026.x
- Fleishman, E. A., & Harris, E. F. (1962). Patterns of leadership behavior related to employee grievances and turnover. *Personnel Psychology*, 15, 43-56. doi: 10.1111/j.1744-6570.1962.tb01845.x
- Fleishman, E. A., Mumford, M. D., Zaccaro, S. J., Levin, K. Y., Korotkin, A. L., & Hein, M. B. (1991). Taxonomic efforts in the description of leader behavior: A synthesis and functional interpretation. *Leadership Quarterly*, 2, 245-287. doi: 10.1016/1048-9843(91)90016-U
- Goodman, J. K., Cryder, C. E., & Cheema, A. (2012). Data collection in a flat world: The strengths and weaknesses of Mechanical Turk samples. *Journal of Behavioral Decision Making*, 26, 213-224. doi: 10.1002/bdm.1753

- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*, 268-279. doi: 0.1037//0021-9010.87.2.268
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*, 692-724. doi: 10.2307/256287
- Lance, C. E., Dawson, B., Birkelbach, D., & Hoffman, B. J. (2010) Method effects, measurement error, and substantive conclusions. *Organizational Research Methods, 13*, 435-455. doi: 10.1177/1094428109352528
- Luthans, F., & Avolio, B. J. (2003). Authentic leadership development. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship*, (pp. 241-258). San Francisco, CA: Berrett-Koehler.
- Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology, 1*, 3-30. doi: 10.1111/j.1754-9434.2007.0002.x
- May, D. R., Chan, A. Y. L., Hodges, T. D., & Avolio, B. J. (2003). Developing the moral component of authentic leadership. *Organizational Dynamics, 32*, 247-260. doi: 10.1016/S0090-2616(03)00032-9
- May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and ability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology, 77*, 11-37. doi: 10.1348/096317904322915892

- Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, 27, 941-966. doi: 10.1002/job.413
- Northouse, P. G. (2010). *Leadership theory and practice* (5th ed.). Thousand Oaks, CA: SAGE.
- Owens, B. P. (2009). Humility in organizations: Establishing construct, nomological, and predictive validity. *Academy of Management Best Paper Proceedings*, 1-6.
- 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, 787-818. doi: 10.5465/amj.2010.0441
- Owens, B. P., Johnson, M. D., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science*, 24, 1517-1538. doi:10.1287/orsc.1120.0795
- Owens, B. P., Rowatt, W. C., & Wilkins, A. L. (2011). Exploring the relevance and implications of humility in organizations. In K. S. Cameron & G. M. Spreitzer (Eds.), *The Oxford handbook of positive organizational scholarship* (pp. 260-272). New York, NY: Oxford University Press.
- Peterson, C. (2006). *A primer in positive psychology*. New York, NY: Oxford University Press.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York, NY: Oxford University Press; Washington, DC: American Psychological Association.

- Renn, R. W., & Vandenberg, R. J. (1995). The critical psychological states: An underrepresented component in job characteristics model research. *Journal of Management*, *21*, 279-303. doi: 10.1177/014920639502100206
- Rich, B. L., LePine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, *53*, 617-635. doi: 10.5465/AMJ.2010.51468988
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, *21*, 600-619. doi: 10.1108/02683940610690169
- Spector, P. E. (1994). Using self-report questionnaires in OB research: A comment on the use of a controversial method. *Journal of Organizational Behavior*, *15*, 385-392. doi: 10.1002/job.4030150503
- Stone, A. G., Russell, R. F., & Patterson, K. (2003). Transformational versus servant leadership: A difference in leader focus. *The Leadership & Organization Development Journal*, *25*, 349-361. doi: 10.1108/01437730410538671
- Tangney, J. P. (2000). Humility: Theoretical perspectives, empirical findings and directions for future research. *Journal of Social and Clinical Psychology*, *19*, 70-82. doi: 10.1521/jscp.2000.19.1.70
- Tynan, R. (2006). The effects of threat sensitivity and face giving on dyadic psychological safety and upward communication. *Journal of Applied Social Psychology*, *35*, 223-247. doi: 10.1111/j.1559-1816.2005.tb02119.x
- Vera, D., & Rodriguez-Lopez, A. (2004). Humility as a source of competitive advantage. *Organizational Dynamics*, *33*, 393-408. doi: 10.1016/j.orgdyn.2004.09.006

- Walumbwa, F. O., & Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: Mediating roles of ethical leadership and work group psychological safety. *Journal of Applied Psychology, 94*, 1275-1286. doi: 10.1037/a0015848
- Zhu, W., Avolio, B. J., & Walumbwa, F. O. (2009). Moderating role of follower characteristics with transformational leadership and follower work engagement. *Group & Organizational Management, 34*, 590-619. doi: 10.1177/1059601108331242

Appendix A

Expressed Humility Scale

The Expressed Humility Scale is not reproduced for copyright reasons, but below is the reference for this measure:

Owens, B. P., Johnson, M. D., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science*, 24, 1517-1538. doi:10.1287/orsc.1120.0795

Appendix B

Job Engagement Scale

The Job Engagement Scale is not reproduced for copyright reasons, but below is the reference for this measure:

Rich, B. L., LePine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53, 617-635. doi: 10.5465/AMJ.2010.51468988

Appendix C

Psychological Safety Scale

The Psychological Safety Scale is not reproduced for copyright reasons, but below is the reference for this measure:

Edmondson, A. (1999). Psychological safety and learning behavior in work teams.

Administrative Science Quarterly, 44, 350-383. doi: 10.2307/2666999

Appendix D

Demographic Items

Please respond to the following items regarding information about yourself. This information will not be used for identification purposes and will only be reported on an aggregated basis.

*Age _____

Gender

- Male
- Female
- Prefer not to respond

Race/Ethnicity

- White or Caucasian
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Hispanic or Latino
- Other _____
- Prefer not to respond

Level of Education

- Below High School
- High School Diploma or equivalent
- Some college, no degree
- Associate's Degree
- Bachelor's Degree (e.g., BA)
- Master's Degree (e.g., MBA)
- Doctoral Degree (e.g., PhD)

*In what country do you currently live? (e.g., USA) _____

Nationality (e.g., American) _____

*Are you currently employed?

- Yes, employed full-time
- Yes, employed part-time
- No

Have you ever been previously employed?

- Yes
- No

Overall work experience; please state if your answer is in months or years by writing either the word “months” or “years” after the number you provide: _____

**Please type your unique worker ID to receive payment: _____*

*Items denoted with an asterisk were required.

Appendix E

IRB Approval Letter

November 6, 2014

Kayla Walters

Re: Protocol #14-036, *Humble Leadership: Implications for Psychological Safety and Follower Engagement*

Dear Ms. Walters:

The IRB has reviewed the materials regarding your study, referenced above, and has determined that it meets the criteria for the Exempt from Review category under Federal Regulation 45CFR46. Your protocol is approved as exempt research, and therefore requires no further oversight by the IRB.

If you wish to modify your study, including the addition of data collection sites, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

Please contact our office if you have any questions. We wish you success with your project!

Sincerely,

Morell E. Mullins, Jr., Ph.D.
Chair, Institutional Review Board
Xavier University

Appendix F

MTurk Interface

Please note that you will have to enter your unique ID TWICE, once HERE and once at the END of the study in order to be compensated, if eligible.

1. Please enter your unique identifier located on the MTurk Dashboard. **You must enter your MTurk ID HERE:**

[Box for ID number was included here]

Also, please SAVE your unique identifier because you will be required to enter it once again AT THE END OF THE STUDY.

2. Please click the following link in order to access the survey. After you complete the survey, click the “Submit” button below.

[Survey link was included here]

[SUBMIT]

Appendix G

Informed Consent Form

You are being asked to participate in a thesis project conducted by Kayla Walters at Xavier University. The purpose of this study is to investigate consequences of leadership styles.

In this study, you will be asked about yourself and your perceptions of your immediate supervisor at work. You will also be asked to complete demographic items. The total time to complete this task will be approximately 15 minutes, but you will be given 1 hour to complete the entire survey.

There are no known risks associated with this study. Participation in this study is entirely voluntary. You are free to withdraw from the study at any time without penalty. Refusal to participate in this study will have no effect on any future services you may be entitled to from Xavier University. You will be paid \$.25 for participating in this study. However, please note that **if you do not complete all required items or if you do not pass the quality checks, you will not be eligible for compensation.** You must be at least 18 years old to participate in this study.

Although you will be required to enter your MTurk unique worker ID at the end of the survey to receive compensation if eligible, the researchers will not be able to access any identifying information you provided to Amazon or MTurk. Moreover, the researchers will not release any of your survey responses to Amazon or MTurk, and only the researchers conducting this study will have access to your responses. Therefore, your responses will remain anonymous. Finally, no analyses of any kind will be conducted prior to the removal of all MTurk ID numbers from the data set.

If you have any questions at any time during the study, you may contact the principal investigator at waltersk1@xavier.edu, or the faculty advisor, Dr. Dalia Diab at diabd@xavier.edu. Questions about your rights as a research subject should be directed to Xavier University's Institutional Review Board at 513-745-2870.

By clicking "Next," you agree to the following statement: I have been given information about this research study and its risks and benefits. I freely give my consent to participate in this research project.

Appendix H

Debriefing Form

Thank you for participating in this research project. In this study, you were asked to answer questions about characteristics of your workplace and immediate supervisor, as well as how you feel about the work that you do. The purpose of this study is to investigate the mediating effect of psychological safety on the relation between humble leader behaviors and employee engagement.

Please do not discuss the specifics of this study with anyone or distribute this form to any potential participants, as data collection is ongoing. If you have any questions or concerns, or if you would like to inquire about the results of this study, please contact the principal investigator, Kayla Walters, at waltersk1@xavier.edu, or the faculty advisor, Dr. Dalia Diab at diabd@xavier.edu.