Leadership behaviors and follower performance: Deductive and inductive examination of theoretical rationales and underlying mechanisms[†]

RYAN K. GOTTFREDSON[1]* AND HERMAN AGUINIS[2]

[1]*Department of Management, Mihaylo College of Business and Economics, California State University, Fullerton, & Gallup, Inc., California, U.S.A.*
[2]*Department of Management, School of Business, George Washington University, Washington, District of Columbia, U.S.A.*

Summary   There are competing theoretical rationales and mechanisms used to explain the relation between leadership behaviors (e.g., consideration, initiating structure, contingent rewards, and transformational leadership) and follower performance (e.g., task performance and organizational citizenship behaviors). We conducted two studies to critically examine and clarify the leadership behaviors–follower performance relation by pitting the various theoretical rationales and mechanisms against each other. We first engaged in deductive (Study 1) and then inductive (Study 2) theorizing and relied upon 35 meta-analyses involving 3327 primary-level studies and 930 349 observations as input for meta-analytic structural equation modeling. Results of our dual deductive–inductive approach revealed an unexpected yet surprisingly consistent explanation for why leadership behaviors affect follower performance. Specifically, leader–member exchange is a mediating mechanism that was empirically determined to be involved in the largest indirect relations between the four major leadership behaviors and follower performance. This result represents a departure from current conceptualizations and points to a common underlying mechanism that parsimoniously explains how leadership behaviors relate to follower performance. Also, results lead to a shift in terms of recommendations for what leaders should focus on to bring about improved follower performance. Copyright © 2016 John Wiley & Sons, Ltd.

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The relation between leadership behaviors and follower performance is one of the oldest and most widely researched topics in organizational behavior (e.g., Stogdill, 1950; Yukl, 2012). In fact, as of the writing of our manuscript, there are 19 published meta-analyses on leadership behaviors–follower performance relations (e.g., DeRue, Nahrgang, Wellman, & Humphrey, 2011; Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Judge, Piccolo, & Ilies, 2004). Historically, the focus has been on whether leader behaviors enhance follower performance and the degree to which they do so across different types of leadership behaviors and follower performance. However, a key question in terms of advancing our understanding of this relation is the following:

Why do positive leadership behaviors improve various types of follower performance? This question is critically important for theoretical progression in the leadership domain because if we do not understand why these specific relations occur, we do not have a solid theory (Bacharach, 1989; Dubin, 1978; Sutton & Staw, 1995; Whetten, 1989). Additionally, if we do not clearly understand why leadership behaviors–follower performance relations occur, we will be limited in our ability to provide accurate and actionable recommendations for leaders that will result in the most favorable performance outcomes.

While the question above is critically important for theoretical and practical reasons, results to date have led to multiple answers across the various leadership behaviors–follower performance relations. For example, consider one of the most well-researched leadership behavior–follower performance relation: transformational leadership and task performance. An examination of the literature reveals that there are at least eight empirically supported mediators explaining this relation, including self-congruence, empowerment, positive effect, trust, person/job fit, core job characteristics, leader–member exchange (LMX), and work engagement (Aryee, Walumbwa, Zhou, & Hartnell, 2012; Chi & Pan, 2012; Piccolo & Colquitt, 2006; van Knippenberg & Sitkin, 2013; Wang, Law, Hackett, Wang, & Chen, 2005). Similar observations can be made for other often-researched leadership behaviors. For consideration, initiating structure, contingent rewards, and transformational leadership (i.e., the four most frequently studied leadership behaviors), the presence of multiple mediating mechanisms – oftentimes more than 10 – serving as explanations for their relations with follower performance suggests that a critical challenge in terms of advancing this domain is not a lack of theory, but the existence of too many theories. Thus, there is an opportunity to clarify and advance theory in this domain by seeking to identify one or several mediating mechanisms that may outperform others in explaining specific leadership behavior–follower performance relations.

The purpose of our research is to identify the mechanisms, and their respective theories, that provide the best explanations for leadership behaviors–follower performance relations across four different types of leadership behaviors (consideration, initiating structure, contingent rewards, and transformational leadership) and two types of follower performance (task performance and organizational citizenship behaviors). To achieve our goal, we know that a single study or even several primary studies would be inadequate. Accordingly, we used meta-analytic structural equation modeling (MASEM; Bergh et al., 2016), and relied on a total of 35 meta-analyses (i.e., 26 already published and an additional nine that we conducted for this study), comprising a total of 3327 primary-level studies and 930 349 observations. MASEM allowed us to move beyond the traditional meta-analytic approach focusing on bivariate relations and investigate a more complete representation of leadership behaviors–follower performance phenomena by including as many potential mediating mechanisms in the leadership behaviors–follower performance relations as possible (Bergh et al., 2016). Specifically, in Study 1, we adopted a deductive approach and in Study 2 we adopted an inductive approach that was informed by results from Study 1. Together, these studies allowed us to examine the vast majority of data collected thus far in the leadership domain to prune and refine the theoretical rationales and mechanisms. Our two-study research program allowed us to identify a single best explanation for why leadership behaviors lead to follower performance across four different leadership behaviors and two types of follower performance. This concise and parsimonious result across the leadership behaviors–follower performance relations not only enhances theoretical precision but also provides leaders with a clearer idea of what they should focus on in order to ensure their leadership behaviors bring about high levels of follower performance.

While we believe our study enhances both theoretical and practical precision, we recognize that it is a step in the right direction, but not likely a "final" answer on this topic. Although we identified a single best explanation, it is based upon a comparison of mediating mechanisms that have been studied frequently enough to be examined meta-analytically. This means that while theory guided our inclusion of constructs in our models, what we could actually include in the models was limited to what could be tested meta-analytically. Despite this constraint, our results help advance our knowledge from the current situation involving multiple and competing theoretical explanations to the identification of a single theoretical rationale that is the best explanation based on an examination of the empirical evidence accumulated to date.

Study 1

Theory and hypotheses

There are four types of leadership behaviors that have historically dominated leadership research, as evidenced by meta-analyses associated with these behaviors. They include consideration, initiating structure, contingent rewards, and transformational leadership. Because these leadership behaviors are considered to be conceptually distinct and developed from different theoretical perspectives, researchers have relied upon different theoretical mechanisms when explaining the relation between each behavior and follower performance. Because the theoretical mediating mechanisms vary across leadership behaviors, we investigate each leadership behavior separately.

In an effort to prune and refine the theoretical rationales and mechanisms involved in the leadership behaviors–follower performance relations, we first identified the theories and theoretical mechanisms that are most prevalent. As noted earlier, there are a few mediating mechanisms and theories that we did not include in our MASEM because of the lack of sufficient empirical research. While this does leave out potential mediating mechanisms and respective theories, the lack of empirical research on those mechanisms is an initial indication that perhaps they are not as theoretically strong or interesting as those mediating mechanisms and theories that we were able to include in our study. Further, if a particular mediating mechanism or theory not heavily researched and consequently not included in our study is believed to be a valid competing explanation for why leadership behaviors lead to follower performance, our results are informative because they serve as a benchmark and baseline against which to compare those alternative explanations in the future.

Consideration and initiating structure

In the 1950s and 1960s a series of studies identified two factors related to leader effectiveness (i.e., Ohio State leadership behaviors): consideration and initiating structure (see Stogdill, 1950). Consideration is the degree to which a leader emphasizes relationships by showing concern and respect for followers, looking out for their welfare, and expressing appreciation and support (Burke, Stagl, Klein, Goodwin, Salas, & Halpin, 2006; Judge et al., 2004). Initiating structure is the degree to which a leader organizes his role and the roles of his followers, is oriented toward the accomplishment of task objectives, and establishes well defined patterns and channels of communication (Burke et al., 2006; Judge et al., 2004).

Consideration and initiating structure were the focus of much of the research in the leadership domain from the time of their creation through the early 1970s. A significant portion of this research used these two leadership behaviors to examine path-goal theory (Judge et al., 2004; Wofford & Liska, 1993), which identified followers' satisfaction and motivation as important theoretical mechanisms involved in the relation between leadership and follower performance (Wofford & Liska, 1993). More specifically, it has been common for leadership researchers to suggest that relationship-oriented leadership (which historically included consideration) creates positive affect, usually measured in the form of follower job satisfaction and/or satisfaction with the leader, which in turn leads to increased performance (House, 1971). Additionally, in explaining why task-oriented leadership (which historically included initiating structure) was related to follower performance, researchers have suggested that task-oriented leadership increases motivation, commonly measured as a reduction in role ambiguity and role conflict, which in turn leads to increased performance (House, 1971)

Additionally, strong relations between (i) these leadership behaviors and commitment (Luthans, Baack, & Taylor, 1987; Mathieu & Zajac, 1990; Wofford & Liska, 1993) and (ii) commitment and follower performance (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002) identifies commitment and commitment theory as an alternative explanation for why the two Ohio State leadership behaviors relate to follower performance. This rationale suggests that consideration and initiating structure should enhance followers' desire to remain members of the organization, which in turn should lead to improved performance.

In sum, there are five theoretical mechanisms representing two different theories that have received significant theoretical and empirical attention in the explanation of the relation between the two Ohio State leadership behaviors and follower performance: job satisfaction, satisfaction with leader, role ambiguity, role conflict, and commitment. Although it is likely that each of these theoretical mechanisms plays at least a small role in the pathway from leadership to follower performance, the most prevalent theory (path-goal theory) associated with these leadership behaviors suggests that (i) follower job satisfaction and satisfaction with leader should be involved in the largest indirect relations between consideration and follower performance; and (ii) role ambiguity and role conflict should be involved in the largest indirect relations between initiating structure and follower performance. Thus, we offer the following hypotheses:

Hypothesis 1: In a model that includes (i) consideration as the antecedent variable; (ii) task performance and OCB as the outcome variables (i.e., follower performance); and (iii) follower job satisfaction, satisfaction with leader, role ambiguity, role conflict, and commitment as mediators; the largest relations between consideration and follower performance will be the indirect relations associated with follower job satisfaction and satisfaction with leader.

Hypothesis 2: In a model that includes (i) initiating structure as the antecedent variable; (ii) task performance and OCB as outcome variables (i.e., follower performance); and (iii) follower job satisfaction, satisfaction with leader, role ambiguity, role conflict, and commitment as mediators; the largest relations between initiating structure and follower performance will be the indirect relations associated with role ambiguity and role conflict.

Contingent rewards

Contingent rewards involve the use of rewards (e.g., recognition) provided by the leader based upon performance and represent an exchange of "give and take" between the leader and the follower to establish a fair and trusting relationship between the two parties and motivate higher performance (Judge & Piccolo, 2004; Podsakoff, Bommer, Podsakoff, & MacKenzie, 2006). Contingent rewards have been studied primarily in two streams of research: (i) leader reward and punishment behaviors and (ii) transactional leadership (Podsakoff et al., 2006). Although each of these two research streams also considers other types of leadership behaviors (e.g., contingent punishment, noncontingent rewards, noncontingent punishment for leader reward and punishment behaviors, and active and passive management-by-exception for transactional leadership) the emphasis of the empirical research within these streams of literature is on contingent rewards, and it is thus emphasized here, similar to other leadership studies (e.g., DeRue et al., 2011).

The two main mechanisms that have been used to explain the pathway from contingent rewards to follower performance are justice and motivation (Podsakoff et al., 2006). Justice theories have been relied upon because contingent rewards emphasize the notion of contingency upon performance, which causes followers to assess the degree of fairness and equity in the allocation of rewards. Studies that have investigated justice as a mediating mechanism between contingent rewards and follower performance have most commonly relied upon the constructs of distributive and procedural justice. Additionally, a variety of motivational theories have also been used, most of which stem from expectancy theory and are related to the motivational components of instrumentality and valence (e.g., reinforcement theory). The most common constructs measured to explain the role of motivation in the relation between contingent rewards and follower performance have been role ambiguity and role conflict because they serve to weaken employees' perceptions of instrumentality.

In addition to fairness and motivation theories, we identified three other theories that have been used to explain why contingent rewards is related to follower performance: job satisfaction theory, social exchange theory, and relational leadership theory. These theories include the constructs job satisfaction, trust, affective commitment, and LMX.

Follower job satisfaction and a general job satisfaction theory have been heavily studied in the leadership literature, and when examined with contingent rewards, they suggest that the presence of contingent rewards improves the positive affect of the follower, which then translates into improved performance (Judge & Piccolo, 2004; Judge, Thoreson, Bono, & Patton, 2001). Conversely, the absence of contingent rewards (not receiving rewards when they are merited) is likely to cause decreased job satisfaction, translating into lower levels of performance (Judge & Piccolo, 2004; Podsakoff et al., 2006). In summary, contingent reward behaviors lead to improved performance under the assumption that a happy employee is a productive employee.

Social exchange theory suggests that when leaders provide social benefits, followers are likely to reciprocate with enhanced performance (Cropanzano & Mitchell, 2005). While this theory has been used less often than the previously identified theories associated with the contingent reward-follower performance relation, it has been suggested that proper reward allocation serves to indicate that the leader trusts the follower and to emotionally attach the employee to the organization which, in turn, increases the followers' desires to exchange the leader's trust and good will with improved performance (Rubin, Bommer, & Bachrach, 2010). Two commonly studied proxy mechanisms used in studies adopting a social exchange conceptual framework are trust (i.e., willingness to be vulnerable to another) and affective commitment (i.e., desire to remain a member of an organization because of a feeling of emotional attachment) (Konovsky & Pugh, 1994; Rubin et al., 2010; Wayne, Shore, & Liden, 1997). In addition to initial theoretical and empirical support for social exchange theory in this context, meta-analyses have identified trust and affective commitment as consequences of contingent rewards (Podsakoff et al., 2006) as well as antecedents of task performance and OCB (Colquitt, Scott, & LePine, 2007; Meyer et al., 2002).

An additional mediating mechanism proposed as an explanation for why contingent rewards is related to follower performance is LMX. However, there are two challenges associated with viewing LMX as a mediating mechanism: how should it be interpreted and what theory does it best represent based upon its interpretation? Traditionally, LMX was developed as a construct to assess the quality of dyadic relationships between a leader and each of the leader's followers, suggesting that the leader develops relationships of different qualities across followers (e.g., an in-group and an out-group follower), and these differences in quality relationships matter (Boies & Howell, 2006; Dansereau, Cashman, & Graen, 1973). LMX was originally meant to be assessed from the perspective of both the leader and the follower (Gerstner & Day, 1997), and it was originally founded in role theory, but later deemed to be more strongly related to social exchange theory (Gerstner & Day, 1997).

But, over time, LMX has been measured and interpreted in ways that differ from its traditional definition and recommended measurement, particularly when assessed along with leadership behaviors (commonly as a consequence of those behaviors) or in meta-analyses. In such instances, researchers are most interested in the followers' perceptions of their relationship with their leader, as opposed to the leaders' perceptions of their relationships with their followers (e.g., Dulebohn et al., 2012; Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016). Thus, in such research, LMX is interpreted as followers' perceptions of the degree to which they have a positive relationship with their leader. This seems to be an appropriate interpretation considering the items of the measure of LMX that is most commonly used and included in leadership meta-analyses (LMX-7): "my supervisor understands my problems and needs," "my supervisor recognizes my potential," "I usually know where I stand with my supervisor," and "how would you describe your working relationship with your supervisor" (Scandura & Graen, 1984).

Given that our research involves leadership behaviors and relies upon meta-analytic data based upon measures of LMX from the follower's perspective, we interpret LMX as the follower's perception of the quality of relationship with their leader. Considering both this interpretation, along with its measures, it is important to note that LMX is not a leadership behavior (although it has been considered as such in past research); rather, it is the followers' perceptions of the quality of a specific relationship, with measures that differ from those of leadership behaviors (perceptions of a relationship versus perceptions of behaviors). We address this and related measurement challenges in more detail in the Discussion section.

The aforementioned interpretation, although somewhat related to social exchange theory, is actually most closely related to relational leadership theory (Uhl-Bien, 2006). Relational leadership theory focuses on the relationship between two parties and reflects the influence process that occurs through the strength of a relationship. This theory

fits well with the explanation for why contingent rewards is related to follower performance from an LMX perspective. Namely, the administration of rewards serves as an indication of a quality relationship (e.g., "Only those with good relationships with their leaders get rewards"), and a better relationship between follower and leader will provide a social and emotional structure allowing the follower to focus and engage in high levels of performance. In other words, followers perceive rewards to be an indication of the quality of leader–follower relationship, and this relationship is critical to follower performance for reasons that likely include having the confidence and support of the leader and feelings of safety.

Although we have identified eight prevalent mechanisms involved in the relation between contingent rewards and follower performance, spanning five theories, the most recent meta-analysis on contingent rewards relied solely on fairness and motivation theories to explain its relation with follower performance, suggesting that distributive justice, procedural justice, role ambiguity, and role conflict should be involved in the largest indirect relations between contingent rewards and follower performance (Podsakoff et al., 2006). In sum, we offer the following hypotheses:

> *Hypothesis 3*: In a model that includes (i) contingent rewards as the antecedent variable; (ii) task performance and OCB as outcome variables (i.e., follower performance); and (iii) distributive justice, procedural justice, role ambiguity, role conflict, follower job satisfaction, trust, affective commitment, and LMX as mediators; the largest relations between contingent rewards and follower performance will be the indirect relations associated with distributive justice, procedural justice, role ambiguity, and role conflict.

Transformational leadership

Transformational leadership is a construct used to describe how leaders influence and inspire followers to make self-sacrifices, commit to difficult objectives, and perform beyond previous levels (Piccolo, Bono, Heinitz, Rowold, Duehr, & Judge, 2012). Currently, it seems to be the most dominant leadership construct in organizational behavior research (Yukl, 2012).

Because transformational leadership is expected to lead followers to perform beyond previous levels, researchers have posited that transformational leadership should have a strong relation with OCBs, which are commonly viewed as extra-role behaviors. Theoretically, the OCB literature has relied heavily upon social exchange theory (Cropanzano & Mitchell, 2005). In turn, this has led transformational leadership researchers to also rely heavily upon social exchange theory. The theoretical rationale is that behaviors associated with transformational leadership should serve to (i) indicate to the follower that the leader is trustworthy and (ii) emotionally attach the employee to the organization and, in turn, increase the followers' desires to exchange the leader's trustworthiness and good will with improved performance (Konovsky & Pugh, 1994; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Once again, the most commonly used mechanisms for social exchange are trust and affective commitment.

Because LMX has been associated with social exchange theory in the past, LMX has also been proposed and tested as a mediator in the relation between transformational leadership and follower performance (Dulebohn et al., 2012). But, we present it here as a mechanism better represented by relational leadership theory, which suggests that transformational leadership behaviors are relational influence tactics that enhance followers' perceptions of the quality of relationship with their leader. In turn, these relationship quality perceptions likely create a sense of support and safety that allow the follower to focus on the tasks at hand, the success of those around them, and excel in terms of performance.

Another mediating mechanism involved in the study of the pathway from transformational leadership to follower performance is job satisfaction. The theoretical rationale is similar to the rationale discussed previously regarding contingent rewards, in that the behaviors associated with transformational leadership (e.g., idealized influence or charisma, inspirational motivation, intellectual stimulation, and individualized consideration) are likely to engender positive outcomes for the followers, leading to higher levels of satisfaction (Judge & Piccolo, 2004). In turn, job satisfaction has been found to lead to enhanced task performance and OCB (Judge et al., 2001; Podsakoff, MacKenzie, Paine, & Bachrach, 2000).

Although job satisfaction and LMX are studied frequently in the transformational leadership literature, the primary theory relied upon in the relation between transformational leadership and follower performance is social exchange theory (Pillai, Schriesheim, & Williams, 1999). For that reason, we posit that trust and affective commitment will be involved in the largest indirect relations between transformational leadership and follower performance. In short, we offer the following hypotheses:

Hypothesis 4: In a model that includes (i) transformational leadership as the antecedent variable; (ii) task performance and OCB as outcome variables (i.e., follower performance); and (iii) trust, affective commitment, LMX, and follower job satisfaction as mediators; the largest relations between transformational leadership and the two follower performance constructs will be the indirect relations associated with trust and affective commitment.

In sum, for each of the four major leadership behaviors, we identified mediating mechanisms and theories that have been used to explain why each leadership behavior is related to follower performance. While they do not include all possible mechanisms and theories that have been proposed or empirically studied, they have all been given enough empirical attention to warrant meta-analytic assessments. This suggests that the mechanisms included in our hypotheses are both theoretically and empirically important.

Method

Overview

We used MASEM, which consists of combining meta-analysis and structural equation modeling. As described in detail by Bergh et al. (2016), MASEM is an ideally suited method to prune and refine theory because it (i) allows us to integrate different theoretical mechanisms into more comprehensive models, and (ii) has a number of statistical advantages that help increase the accuracy of and confidence in the estimation of the relations under consideration. These advantages include maximizing external validity by including all the available data for a particular relation, maximizing internal validity by allowing for the testing of competing models with different underlying causal structures, and having a statistical power advantage over primary-level studies because of the large sample sizes associated with meta-analyses (Bergh et al., 2016; Cheung & Chan, 2005). Additionally, MASEM allows us to offer a more complete representation of the leadership behaviors–follower performance phenomena by including and simultaneously considering many potentially important constructs and relations based upon meta-analytic research.

We implemented all procedures following best-practice recommendations as described by Bergh et al. (2016) and Landis (2013). As the first step, we created meta-analytically derived correlation matrices involving all variables in the models. As will be further described, these matrices include 86 unique meta-analytically derived correlations based on a total of 35 meta-analyses: 26 published meta-analyses, seven new meta-analyses that we conducted for Study 1, and two new meta-analyses we conducted for Study 2. These meta-analytically derived correlations were based on a total of 3327 primary-level studies and 930 349 observations. Then, we used structural equation modeling to test each of our hypotheses which pits underlying mechanisms (i.e., mediating effects) against each other. Specifically, in each model, we formally compared the largest direct or indirect relation with all of the other relations to determine if that largest relation is statistically larger than all other relations in each of the models.

Existing meta-analyses

We first conducted a search of meta-analyses associated with each leadership construct, each mediator, and each type of follower performance (i.e., task performance and OCB). This involved searching ABI Inform, Google Scholar, PsychINFO, and Web of Science for combinations of the word "meta" and each of the leadership construct titles, each of the plausible mediator titles, and search terms associated with task performance (i.e., "task performance" and "job performance") and organizational citizenship behaviors (i.e., "organizational citizenship behavior," and "organizational citizenship behaviors"). In the case of OCBs versus other similar constructs such as contextual behavior,

contextual performance, and extra-role behaviors, we found that each of these constructs is most frequently utilized in different areas of research, and each area defines them slightly differently. Because we are examining leadership, we wanted to be consistent with the domain, which primarily focuses on OCBs (compared to contextual performance, contextual behavior, and extra-role behaviors). This search resulted in 38 meta-analyses that reported at least one correlation between any of the constructs involved in our hypotheses (the list of these 38 meta-analyses is available online as supporting information). Of these 38 meta-analyses, 17 were from meta-analyses on leadership behaviors and the other 21 primarily focused on the plausible mediators or follower performance constructs.

In some cases, we identified more than one correlation from different meta-analyses representing a single relation. To determine which of the meta-analytically derived correlations to include in the meta-analytic correlation matrices, we relied upon multiple criteria as follows (Bergh et al., 2016): (i) correlations that involved constructs whose operationalizations are consistent with a priori definitions; (ii) correlations that used appropriate pre-specified meta-analytic techniques (e.g., measurement error corrections given that our interest is in construct-level relations; Le, Schmidt, & Putka, 2009); and (iii) correlations reported by meta-analyses based on the largest sample size. Thus, we eventually used meta-analytically derived correlations from 26 of the 38 initially identified meta-analyses for our correlation matrices (we refer to each of these 26 meta-analyses in tables provided later in our manuscript).

The 26 meta-analyses allowed us to identify most but not all of the correlations required to assess our hypotheses. Specifically, for the consideration models, we identified 26 of the 28 needed correlations (all except follower job satisfaction and satisfaction with leader, and satisfaction with leader and OCB); for the initiating structure models, we identified 25 of the 28 needed correlations (all except follower job satisfaction and satisfaction with leader, satisfaction with leader and OCB, and initiating structure and OCB); for the contingent rewards models, we identified 51 of the 55 needed correlations (all except role ambiguity and trust, role conflict and trust, role ambiguity and procedural justice, and role conflict and procedural justice); and for the transformational leadership models, we identified all of the 21 needed correlations. Together, this meant that our study required that we conduct seven additional and original meta-analyses.

Original meta-analyses

We followed best-practice recommendations as offered by Aguinis, Pierce, Bosco, Dalton, and Dalton (2011), Aytug, Rothstein, Zhou, and Kern (2012), and Kepes, McDaniel, Brannick, and Banks (2013). For each meta-analysis, we relied upon five different databases—ABI Inform, Google Scholar, ProQuest Dissertations and Theses, PsychINFO, and Web of Science—to identify primary-level studies. Initial exclusion criteria were non-English articles; clinical, prisoner, or church studies; and samples that involved children. Initial inclusion criteria included, first, identifying published articles, book chapters, dissertations, accessible conference abstracts, company reports, and unpublished studies that included a correlation matrix that reported a correlation between the constructs involved in the meta-analysis. For some of the meta-analyses, constructs were labeled differently than its most recognized label (e.g., role clarity, which is a reverse-coded measure of role ambiguity), and in such cases we initially included the article. Second, studies that met this previous criterion were examined to determine the source of the measured constructs. For plausible mediators (e.g., initiating structure, job satisfaction, satisfaction with leader, trust, procedural justice), it was necessary that the construct be measured from the perspective of the subordinate. For OCB, we allowed the construct to be measured from any perspective (e.g., self, peer, manager). Occasionally, a primary study reported relations between multiple dimensions of one construct and another construct (e.g., initiating structure and OCB-individual as well as initiating structure and OCB-organization). In such instances, we followed Hunter and Schmidt's (2004) recommendation and created composite constructs to ensure that only independent effect sizes were included in each meta-analysis. Because our interest was in construct-level relations, we implemented the Hunter and Schmidt (2004) psychometric meta-analytic approach. Also, we conducted publication bias (Egger, Davey-Smith, Schneider, & Minder, 1997) and outlier (Aguinis, Gottfredson, & Joo, 2013) analyses. Only the meta-analysis addressing the relation between trust and role ambiguity resulted in a significant Egger et al. (1997) test value. We used the trim and fill method to assess the effect that such potential bias might have on the meta-analytic correlation (Dalton, Aguinis, Dalton, Bosco, & Pierce, 2012). Because the

difference between the two corrected correlations was negligible ($-.456$ compared to $-.450$), we used the original meta-analytic corrected correlation ($-.456$). Outlier analysis based on the sample-adjusted meta-analytic deviancy (SAMD) statistic showed no differences in results with and without outliers identified (Aguinis et al., 2013). Accordingly, we did not omit any outliers from the analyses.

Meta-analytic structural equation modeling

Using our meta-analytic correlation matrices, MASEM involved testing a series of nested models pertaining to each of the four leadership behaviors. First, we assessed a baseline model involving the leadership construct as the focal antecedent (exogenous variable), mediators (endogenous variables), and task performance and OCB as the outcome variables (endogenous variables). But, when engaging in structural equation modeling, it is necessary to identify alternative plausible models (Vandenberg & Grelle, 2009; Williams, Vandenberg, & Edwards, 2009). Thus, we also tested additional models for each of the leadership behaviors based on previous research. Specifically, for consideration and initiating structure we tested three additional alternative models: (i) commitment as a consequence of the satisfaction and role constructs (for rationale, see Gaertner, 1999; Mathieu & Zajac, 1990; Tett & Meyer, 1993); (ii) satisfaction constructs as a consequence of the role constructs (for rationale see Fried, Shirom, Gilboa, & Cooper, 2008); and (iii) covariation of disturbance terms of similar constructs (follower job satisfaction and satisfaction with leadership, role ambiguity and role conflict, and task performance and OCB) to account for unmeasured common causes. For contingent rewards, we assessed the following four alternative models: (i) trust and affective commitment as consequences of the other plausible mediators (for rationale see Cohen-Charash & Spector, 2001; Colquitt et al., 2013; Dirks & Ferrin, 2002; Meyer et al., 2002); (ii) follower job satisfaction as a consequence of the justice constructs, the role constructs, and LMX (for rationale see Cohen-Charash & Spector, 2001; Colquitt et al., 2013; Fried et al., 2008); (iii) the justice and role constructs as consequences of LMX (for rationale see Colquitt et al., 2013; Dulebohn et al., 2012); and (iv) covariation of disturbance terms of similar constructs (procedural justice and distributive justice, role ambiguity and role conflict, and task performance and OCB) to account for unmeasured common causes. Finally, for transformational leadership, we assessed the following three alternative models: (i) trust and affective commitment as consequences of follower job satisfaction and LMX (for rationale see Dirks & Ferrin, 2002; Dulebohn et al., 2012; Meyer et al., 2002); (ii) follower job satisfaction as a consequence of LMX (for rationale see Dulebohn et al., 2012); and (iii) covariation of disturbance terms of similar constructs (task performance and OCB) to account for unmeasured common causes.

While some primary-level studies may not include the same ordering of constructs as in these alternative models, we relied upon the orderings that are most commonly theorized and studied in the leadership field and/or are what are suggested in published meta-analyses, indicating common consensus. Thus, the ordering of relations in our models are those that are most commonly agreed upon.

First, our alternative model specification procedure allowed us to identify one best fitting model for each of the four leadership behaviors. Second, we used the best fitting models to test each of our hypotheses by first identifying the size of each of the direct and indirect relations in the models. Third, we used the post-hoc comparison procedure outlined by MacKinnon (2000) and Preacher and Hayes (2008), to empirically compare the relative size of direct and indirect relations. Specifically, we compared the largest direct or indirect relation between the leadership construct and task performance and OCB with all other direct and indirect relations involved in that particular leadership behavior–follower performance relation. If the largest relation was a hypothesized indirect relation, then the post-hoc comparisons served as a rigorous and formal test of the hypothesis. But, if the largest relation was not a hypothesized indirect relation, this immediately suggested that the hypothesis was not supported. Even if the largest relation was not a hypothesized relation, we were still interested in determining if it was larger than all other relations, providing us the opportunity to test whether a non-hypothesized mechanism outperformed a hypothesized mechanism in explaining the relation between the leadership behavior and follower performance. Thus, we still engaged in post-hoc comparisons in an effort to accomplish our goal of pruning and refining the theoretical rationales and mechanisms involved in the relation between leadership behaviors and follower performance. The results of these comparisons led us to engage in some inductive analyses, which we conducted in our follow-up Study 2.

Results and discussion

A summary of results based on the seven original meta-analyses is included in Table 1 (the list of studies used for each of the meta-analysis is available online as supporting information). Combining the 26 existing meta-analyses with the seven new meta-analyses allowed us to complete each of the four meta-analytic correlation matrices needed to assess our hypotheses. These matrices (see Tables 2–5), containing a total of 86 unique meta-analytically derived correlations, served as input for MASEM, and can also be used by other researchers to replicate and/or extend our analyses.

We conducted MASEM using AMOS 21. Using the harmonic mean for assessing the significance of path coefficients, the Ns ranged from 4816 to 5757. The best-fitting models associated with each leadership construct are shown in Figure 1. For ease of presentation, this figure only shows the largest relations in each model but 12 supplementary tables including detailed results regarding all post-hoc comparisons (i.e., coefficients, differences between coefficients, standard errors for comparisons between coefficients, and confidence intervals for differences between coefficients) are available online as supporting information.

Consideration

There are two mechanisms tied for being the largest in the relation between consideration and task performance: consideration–job satisfaction–task performance (.09) and consideration–satisfaction with leader–task performance (.09). These results provide initial support for Hypothesis 1 regarding task performance. For the relation between consideration and OCB, the largest relation was the direct relation (.34), with much smaller total indirect relations (−.02). These results did not provide support for Hypothesis 1 regarding the OCB outcome.

After identifying the largest relations, direct or indirect, we conducted post-hoc comparisons with all other direct or indirect relations in the model (i.e., a total of 17). Results indicated that the consideration–job satisfaction–task performance relation, which was .09, was not significantly larger than any of the other direct and indirect relations associated with task performance (relations ranged from −.10 to .09). In other words, there is no indirect mechanism in the relation between consideration and task performance that is statistically larger and more important than any of the other relations, suggesting no theoretical mechanism is any more important than the others.

Because the largest relation between consideration and OCB was the direct relation (.34), we compared it to all of the indirect relations (ranging from −.07 to .02). Results indicated that the direct relation was significantly larger

Table 1. Summary of results for original meta-analyses (relations 1–7 were used in study 1 and relations 8–9 were used in study 2).

Relation	k	N	r	r_c	SD_{r_c}	Q	80% CV Lower	80% CV Upper	95% CI Lower	95% CI Upper
1. IS and OCB	12	2105	.24	.31	.07	71.46*	.04	.44	.14	.34
2. JS and SL	179	75 114	.43	.50	.02	1288.49*	.30	.55	.41	.44
3. SL and OCB	36	8415	.19	.23	.02	105.64*	.08	.30	.15	.23
4. RA and T	34	10 843	−.37	−.46	.03	275.93*	−.54	−.21	−.42	−.33
5. RC and T	17	5892	−.28	−.34	.02	63.19*	−.39	−.18	−.33	−.24
6. RA and PJ	18	4281	−.36	−.41	.02	94.79*	−.51	−.21	−.42	−.30
7. RC and PJ	8	4357	−.34	−.41	.02	72.45*	−.48	−.20	−.42	−.26
8. C and LMX	23	6209	.64	.74	.09	1271.86*	.31	.98	.54	.75
9. IS and LMX	22	5973	.56	.66	.06	636.81*	.28	.84	.47	.65

Note: k = number of samples involved in primary-level studies included in the meta-analysis; N = total number of observations within samples; r = uncorrected population correlation; r_c = population correlation corrected for unreliability and range restriction; SD_{r_c} = percentage of variance in r_c explained by study artifacts; Q = chi-square test for homogeneity of effect sizes; 80% CV = 80% credibility interval based around r; 95% CI = 95% confidence interval based around r; C = consideration; IS = initiating structure; JS = follower job satisfaction; LMX = leader–member exchange; OCB = organizational citizenship behaviors; PJ = procedural justice; RA = role ambiguity; RC = role conflict; SL = satisfaction with leader; T = trust.
*$p < .05$.

Table 2. Meta-analytic correlation matrix for consideration (study 1).

Variables	1	2	3	4	5	6	7	8
1 Consideration	—							
2 Role ambiguity (r, r_c)	−.30, −.44[e]	—						
k, N	25, 2854							
CI	??:??							
3 Role conflict (r, r_c)	−.28, −.42[e]	.27, .42[e]	—					
k, N	9, 1709	47, 10217						
CI	??:??	??:??						
4 Follower job satisfaction (r, r_c)	.40, .46[f]	−.36, −.46[b]	−.34, −.42[b]	—				
k, N	76, 11374	52, 11287	54, 11851					
CI	??:??	??:??	??:??					
5 Satisfaction with leader (r, r_c)	.68, .78[f]	−.36, −.53[e]	−.36, −.53[e]	.43, .50	—			
k, N	49, 7871	17, 3619	14, 3440	179, 75 114				
CI	??:??	??:??	??:??	41:44				
6 General commitment (r, r_c)	.24, .34[i]	−.24, −.32[c]	−.18, −.23[c]	.59, .70[m]	.30, .41[i]	—		
k, N	12, 2642	9, 7040	9, 7040	68, 35 282	23, 5236			
CI	??:??	??:??	??:??	57:61	??:??			
7 Task performance (r, r_c)	.21, .13[o]	−.15, −.21[n]	−.06, −.07[n]	.18, .30[g]	.16, .19[d]	.13, .18[l]	—	
k, N	21, 3808	74, 11 698	54, 9910	312, 54 471	21, 3630	65, 15 511		
CI	??:??	??:??	??:??	27:33	??:??	.01:.35		
8 Organizational citizenship behaviors (r, r_c)	.26, .32[j]	−.13, −.15[a]	−.12, −.16[a]	.20, .24[h]	.19, .23	.17, .20[h]	.39, .47[k]	—
k, N	8, 3062	24, 6458	22, 6257	22, 7100	36, 8415	17, 5133	24, 7947	
CI	.28:.36	−.17:−.08	−.17:−.08	.22:.26	.15:.23	.17:.24	.37:.40	

Note. k = number of studies; N = combined sample size; r = mean sample-size weighted observed correlations; r_c = mean sample-size-weighted corrected correlation; CI = 95% confidence interval; ?? = figure not reported in original meta-analysis.
Harmonic mean sample size = 5700.
Sources for correlations from previous meta-analyses:
[a] = Eatough, Chang, Miloslavic, and Johnson (2011);
[b] = Fried et al. (2008);
[c] = Gaertner (1999);
[d] = Iaffaldano and Muchinsky (1985);
[e] = Jackson and Schuler (1985);
[f] = Judge et al. (2004);
[g] = Judge et al. (2001);
[h] = LePine, Erez, and Johnson (2002);
[i] = Mathieu and Zajac (1990);
[j] = Organ and Ryan (1995);
[k] = Podsakoff, Whiting, Podsakoff, and Blume (2009);
[l] = Riketta (2002);
[m] = Tett and Meyer (1993);
[n] = Tubre and Collins (2000);
[o] = Wofford and Liska (1993).

Table 3. Meta-analytic correlation matrix for initiating structure (study 1).

Variables	1	2	3	4	5	6	7	8
1 Initiating structure	—							
2 Role ambiguity (r, r_c)	$-.28, -.43^e$	—						
k, N	31, 3705							
CI	??:??							
3 Role conflict (r, r_c)	$-.17, -.27^e$	$.27, .42^e$	—					
k, N	10, 1839	47, 10217						
CI	??:??	??:??						
4 Follower job satisfaction (r, r_c)	$.19, .22^f$	$-.36, -.46^b$	$-.34, -.42^b$	—				
k, N	72, 10317	52, 11287	54, 11851					
CI	??:??	??:??	??:??					
5 Satisfaction with leader (r, r_c)	$.27, .33^f$	$-.36, -.53^e$	$-.36, -.53^e$	$.43, .50$	—			
k, N	49, 8070	17, 3619	14, 3440	179, 75114				
CI	??:??	??:??	??:??	.41:.44				
6 General commitment (r, r_c)	$.21, .29^i$	$-.24, -.32^c$	$-.18, -.23^c$	$.59, .70^l$	$.30, .41^i$	—		
k, N	14, 3019	9, 7040	9, 7040	68, 35282	23, 5236			
CI	??:??	??:??	??:??	.57:.61	??:??			
7 Task performance (r, r_c)	$.15, .11^n$	$-.15, -.21^m$	$-.06, -.07^m$	$.28, .30^g$	$.16, .19^d$	$.13, .18^k$	—	
k, N	25, 4219	74, 11698	54, 9910	312, 54471	21, 3630	65, 15511		
CI	??:??	??:??	??:??	.27:.33	??:??	.01:.35		
8 Organizational citizenship behaviors (r, r_c)	$.24, .31$	$-.13, -.15^a$	$-.12, -.16^a$	$.20, .24^h$	$.19, .23$	$.17, .20^h$	$.39, .47^j$	—
k, N	12, 2105	24, 6458	22, 6257	22, 7100	36, 8415	17, 5133	24, 7947	
CI	.14:.34	$-.17:-.08$	$-.17:-.08$	.22:.26	.15:.23	.17:.24	.37:.40	

Note. k = number of studies; N = combined sample size; r = mean sample-size weighted observed correlations; r_c = mean sample-size-weighted corrected correlation; CI = 95% confidence interval; ?? = figure not reported in original meta-analysis.
Harmonic mean sample size = 5747.
Sources for correlations from previous meta-analyses:
[a] = Eatough et al. (2011);
[b] = Fried et al. (2008);
[c] = Gaertner (1999);
[d] = Iaffaldano and Muchinsky (1985);
[e] = Jackson and Schuler (1985);
[f] = Judge et al. (2004);
[g] = Judge et al. (2001);
[h] = LePine et al. (2002);
[i] = Mathieu and Zajac (1990);
[j] = Podsakoff et al. (2009);
[k] = Riketta (2002);
[l] = Tett and Meyer (1993);
[m] = Tubre and Collins (2000);
[n] = Wofford and Liska (1993).

Table 4. Meta-analytic correlation matrix for contingent rewards (study 1).

Variables	1	2	3	4	5	6	7	8	9	10	11
1 Contingent rewards	—										
2 LMX (r, r_c)	.65, .73[e]	—									
k, N	6, 1900										
CI	.58:.88										
3 Role ambiguity (r, r_c)	−.36, −.42[n]	−.34, −.42[e]	—								
k, N	25, 7940	18, 5813									
CI	−.45: −.39	−.47: −.36									
4 Role conflict (r, r_c)	−.26, −.30[o]	−.27, −.33[e]	.27, .42[j]	—							
k, N	12, 4881	14, 5480	47, 10217								
CI	??:??	−.38: −.27	??:??								
5 Distributive justice (r, r_c)	.42, .50[n]	.38, .44[e]	−.14, −.18[h]	−.19, −.24[h]	—						
k, N	6, 1856	32, 6693	9, 7040	9, 7040							
CI	.47:.53	.36:.50	??:??	??:??							
6 Procedural justice (r, r_c)	.48, .56[n]	.48, .55[e]	−.36, −.41	−.34, −.41	.51, .61[c]	—					
k, N	6, 1856	30, 7211	18, 4281	8, 4357	184, 67956						
CI	.49:.63	.48:.61	−.42: −.30	−.42: −.26	.49:.54						
7 Follower job satisfaction (r, r_c)	.44, .52[n]	.42, .49[e]	−.36, −.46[g]	−.34, −.42[g]	.39, .47[a]	.40, .43[a]	—				
k, N	43, 11461	88, 22520	52, 11287	54, 11851	23, 26277	36, 29028					
CI	.47:.57	.45:.52	??:??	??:??	.46:.48	.42:.44					
8 Trust (r, r_c)	.59, .67[n]	.69, .77[d]	−.37, −.46	−.28, −.34	.50, .58[d]	.61, .68[d]	.51, .65[d]	—			
k, N	12, 4192	8, 1183	34, 10843	17, 5892	15, 3562	30, 5972	34, 10631				
CI	.59:.75	.66:.71	−.42: −.33	−.33: −.24	.48:.52	.59:.62	.50:.52				
9 Affective commitment (r, r_c)	.39, .46[n]	.36, .41[e]	??, −.39[m]	??, −.30[m]	.37, .47[a]	.43, .50[a]	??, .65[m]	??, .54[b]	—		
k, N	3, 1297	21, 8118	12, 3774	9, 3225	27, 30257	52, 27437	69, 23656	32, 7066	—		

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
CI	.39:.53	.34:.48	??:??	??:??	.46:.48	.49.51	??:??	??:??	—	—
10 Task performance (r, r_c)	.26, .28[n]	.30, .34[e]	−.15, −.21[q]	−.06, −.07[q]	.19, .26[c]	.19, .24[c]	.18, .30[k]	.26, .33[b]	??, .16[m]	—
k, N	17, 6180	108, 25 322	74, 11 698	54, 9910	45, 11 336	57, 14 258	312, 54 471	27, 4882	25, 5938	—
CI	.25:.31	.30:.37	??:??	??:??	.14:.24	.15:.23	??:??	.27:.33	??:??	—
11 Organizational citizenship behaviors (r, r_c)	.19, .21[n]	.32, .37[i]	−.13, −.15[f]	−.12, −16[f]	.17, .21[c]	.23, .30[c]	.20, .24[l]	.22, .27[b]	??, .32[m]	.39, .47[p]
k, N	3, 554	50, 9324	24, 6458	22, 6257	36, 10100	71, 16864	22, 7100	19, 4050	22, 6277	24, 7947
CI	.06:.36	.33:.41	−.17: −.08	−.17: −.08	.14:.20	.20:.26	.22:.26	.19:.25	??:??	.37:.40

Note. k = number of studies; N = combined sample size; r = mean sample-size weighted observed correlations; r_c = mean sample-size-weighted corrected correlation; CI = 95% confidence interval; ?? = figure not reported in original meta-analysis.
Harmonic mean sample size = 4816.
Sources for correlations from previous meta-analyses:
[a] = Cohen-Charash and Spector (2001);
[b] = Colquitt et al. (2007);
[c] = Colquitt et al. (2013);
[d] = Dirks and Ferrin (2002);
[e] = Dulebohn et al. (2012);
[f] = Eatough et al. (2011);
[g] = Fried et al. (2008);
[h] = Gaertner (1999);
[i] = Ilies, Nahrgang, and Morgeson (2007);
[j] = Jackson and Schuler (1985);
[k] = Judge et al. (2001);
[l] = LePine et al. (2002);
[m] = Meyer et al. (2002);
[n] = Podsakoff et al. (2006);
[o] = Podsakoff, MacKenzie, and Bommer (1996);
[p] = Podsakoff et al. (2009);
[q] = Tubre and Collins (2000).

Table 5. Meta-analytic correlation matrix for transformational leadership (study 1).
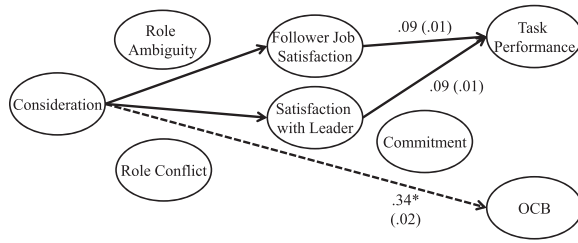
Variables	1	2	3	4	5	6	7
1 Transformational leadership	−N/A						
2 Leader–member exchange (r, r_c)	.66, .73[c]	N/A					
k, N	20, 5451	N/A					
CI	.64:.81	N/A					
3 Follower job satisfaction (r, r_c)	??, .58[e]	.42, .49[c]	N/A				
k, N	18, 5279	88, 22 520	N/A				
CI	??:??	.45:.52	N/A				
4 Trust (r, r_c)	.72, .79[b]	.69, .77[b]	.51, .65[b]	N/A			
k, N	13, 5657	8, 1183	34, 10631	N/A			
CI	.71:.73	.66:.71	.50:.52	N/A			
5 Affective commitment (r, r_c)	??, .46[h]	.36, .41[c]	??, .65[h]	??, .54[a]	N/A		
k, N	4, 2361	21, 8118	69, 23 656	32, 7066	N/A		
CI	??:??	.34:.48	??:??	??:??	N/A		
6 Task performance (r, r_c)	.19, .21[j]	.30, .34[c]	.18, .30[f]	.26, .33[a]	??, .16[h]	N/A	
k, N	31, 7016	108, 25 322	312, 54471	27, 4882	25, 5938	N/A	
CI	.16:.26	.30:.37	.27:.33	.21:.31	??:??	N/A	
7 Organizational citizenship behaviors (r, r_c)	.26, .30[j]	.32, .37[d]	.20, .24[g]	.22, .27[a]	??, .32[h]	.39, .47[i]	N/A
k, N	28, 7970	50, 9324	22, 7100	19, 4050	22, 6277	24, 7947	N/A
CI	.26:.34	.33:.41	.22:.26	.19:.25	??:??	.37:.40	N/A

Note. k = number of studies; N = combined sample size; r = mean sample-size weighted observed correlations; r_c = mean sample-size-weighted corrected correlation; CI = 95% confidence interval; ?? = figure not reported in original meta-analysis.
Harmonic mean sample size = 5610.
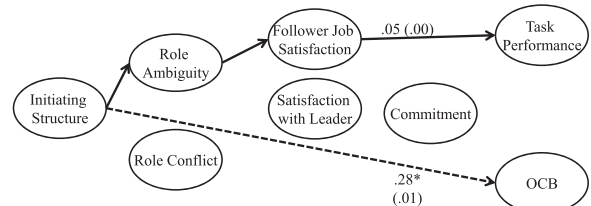Sources for correlations from previous meta-analyses:
[a] = Colquitt et al. (2007);
[b] = Dirks and Ferrin (2002);
[c] = Dulebohn et al. (2012);
[d] = Ilies et al. (2007);
[e] = Judge and Piccolo (2004);
[f] = Judge et al. (2001);
[g] = LePine et al. (2002);
[h] = Meyer et al. (2002);
[i] = Podsakoff et al. (2009);
[j] = Wang et al. (2011).

Consideration model

Role Ambiguity, Follower Job Satisfaction, Task Performance, Consideration, Satisfaction with Leader, Commitment, Role Conflict, OCB

.09 (.01) .09 (.01) .34* (.02)

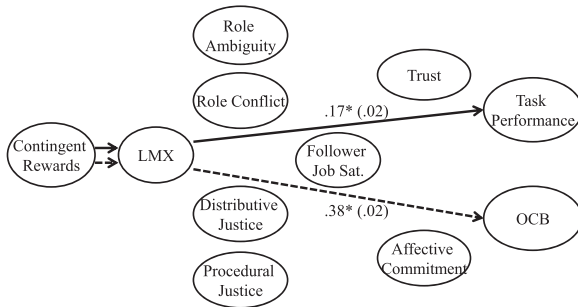| Task Performance (Bolded)		OCB (Dotted)	
Total Relations	.13 (.01)	Total Relations	.32 (.01)
Direct Relation	-.10 (.02)	Direct Relation	.34 (.02)
Total Indirect Relations	.23 (.02)	Total Indirect Relations	-.02 (.02)
Model Fit: Fully Saturated			

* = significantly larger than all other relations directed at that particular performance outcome based upon post-hoc analyses

Initiating Structure model

Initiating Structure, Role Ambiguity, Follower Job Satisfaction, Task Performance, Satisfaction with Leader, Commitment, Role Conflict, OCB

.05 (.00) .28* (.01)

Task Performance (Bolded)		OCB (Dotted)	
Total Relations	.11 (.01)	Total Relations	.31 (.01)
Direct Relation	.04 (.01)	Direct Relation	.28 (.01)
Total Indirect Relations	.07 (.01)	Total Indirect Relations	.03 (.01)
Model Fit: Fully Saturated			

* = significantly larger than all other relations directed at that particular performance outcome based upon post-hoc analyses
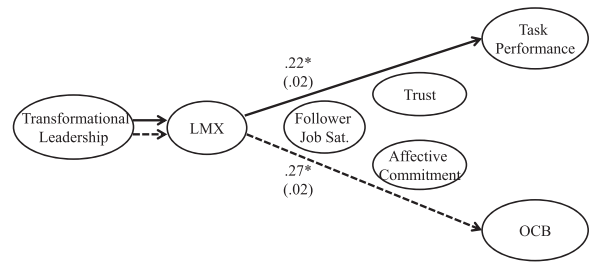
Contingent Rewards model

Role Ambiguity, Role Conflict, Trust, Task Performance, Contingent Rewards, LMX, Follower Job Sat., Distributive Justice, Affective Commitment, Procedural Justice, OCB

.17* (.02) .38* (.02)

Task Performance (Bolded)		OCB (Dotted)	
Total Relations	.28 (.01)	Total Relations	.21 (.01)
Direct Relation	-.03 (.02)	Direct Relation	-.22 (.02)
Total Indirect Relations	.31 (.02)	Total Indirect Relations	.43 (.02)
Model Fit			

	Chi-square	CFI	GFI	SRMR
	595.24	.98	.98	.03

* = significantly larger than all other relations directed at that particular performance outcome based upon post-hoc analyses

Transformational Leadership model

Task Performance, Trust, Transformational Leadership, LMX, Follower Job Sat., Affective Commitment, OCB

.22* (.02) .27* (.02)

Task Performance (Bolded)		OCB (Dotted)	
Total Relations	.21 (.01)	Total Relations	.30 (.01)
Direct Relation	-.26 (.02)	Direct Relation	.09 (.02)
Total Indirect Relations	.47 (.02)	Total Indirect Relations	.21 (.02)
Model Fit			

	Chi-square	CFI	GFI	SRMR
	107.93	.99	.99	.01

* = significantly larger than all other positive relations directed at that particular performance outcome based upon post-hoc analyses

Note: We tested paths between all the constructs in the models, but for ease of presentation only the largest paths are identified. Numbers associated with these paths are standardized coefficients (standard errors in parenthesis).

Figure 1. Meta-analytic structural equation modeling results for underlying mechanisms linking leadership and follower performance for consideration, initiating structure, contingent rewards, and transformational leadership (Study 1).

than all of the indirect relations associated with OCB. This result suggests that either there is no primary theoretical mechanism that explains the relation between consideration and OCB or there is such a mechanism but it is not currently prevalent in the consideration literature, and thus not included in this model. Taken together, these results do not provide support for Hypothesis 1.

Initiating structure

For the initiating structure–task performance relation, the largest mechanism was the indirect relation through role ambiguity and follower job satisfaction (.05). For the relation between initiating structure and OCB, the largest mechanism is the direct relation (.28), with very little total indirect relations (.03), which is similar to the consideration model.

Similar to the analyses associated with consideration, there were 17 comparisons involving the relations between initiating structure and the two types of follower performance, respectively. Results were also similar. We compared

the largest relation between initiating structure and task performance (initiating structure–role ambiguity–job satisfaction–task performance; .05) to all other initiating structure–task performance relations (ranging from −.04 to .04), and results indicated that it was not significantly larger than any of the other relations. In other words, there is no superior underlying mechanism in the relation between initiating structure and task performance out of all of the mechanisms included in the model. We compared the largest relation between initiating structure and OCB (direct relation; .28) to all indirect relations associated with OCB (ranging from −.05 to .03) and it was significantly larger than all of those relations. These results suggest that either there is no primary theoretical mechanism that explains the relation between initiating structure and OCB or there is such a mechanism but it is not currently prevalent in the initiating structure literature, and thus not included in this model. Taken together, these results do not provide support for Hypothesis 2.

Contingent rewards

The largest mechanism for the contingent reward–task performance and contingent rewards–OCB relations is the indirect relations through LMX (.17 and .38, respectively), which was not one of the hypothesized mechanisms. However, this is an intriguing result because LMX is a social mechanism, and although social mechanisms are acknowledged to be important in the contingent reward literature, they are not the most heavily emphasized. We compared the indirect relations of contingent reward–LMX–task performance and contingent performance–LMX–OCB relations to the other 59 direct and indirect relations associated with each type of follower performance, respectively. For all of these comparisons, these relations were significantly larger than all of the other relations associated with the given type of follower performance (ranging from −.22 to .08 across both models). These results confirmed that LMX is indeed involved in the largest relation between contingent rewards and follower performance, and thus it is the primary mediating mechanism in those relations. Not only does this result not support Hypothesis 3, but it also suggests that the primary mechanism used to explain the relation between contingent rewards and follower performance is different than what has been most heavily relied upon in the contingent rewards literature. Accordingly, this result offers initial indication that the theory explaining the contingent reward–follower performance relations may need to be refined to include and emphasize LMX.

Transformational leadership

The largest mechanism for the transformational leadership–task performance and transformational leadership–OCB relations is also the indirect relations through LMX (.22 and .27, respectively). We compared the two largest mechanisms, both involving the indirect relation through LMX, to the other 11 direct and indirect relations associated with each type of follower performance, respectively. For the comparisons associated with task performance, the largest mechanism (.22) was larger than all other indirect relations (ranging from −.26 to .12), but it was not significantly larger than the direct relation (−.26). In short, LMX is the most primary mediating mechanism in the relation between transformational leadership and task performance. For the comparisons associated with OCB, the largest relation (.27) was found to be significantly larger than all other direct and indirect relations (ranging from −.08 to .09). This suggests that LMX is the most primary mediating mechanism in the relation between transformational leadership and OCB. Finally, for both of these sets of post-hoc analyses, indirect relations with trust and affective commitment were small. Thus, overall, there was no support for Hypothesis 4.

Summary

Study 1 was an effort to prune and refine the theoretical rationale and mechanisms involved in the relations between four leadership behaviors and two types of follower performance. In doing so, we relied upon the strongest theoretical rationale associated with the four different leadership behaviors to identify and hypothesize which of the various mediating mechanisms should be involved in the largest relation between the leadership behaviors and follower performance. This top-down deductive theorizing and analysis provided results that, for the most part, did not confirm

the theoretical rationale most predominantly relied upon for each of the four leadership domains. Specifically, we found that (i) there is no dominant mediating mechanism explaining the pathway from consideration and initiating structure to follower performance, and (ii) LMX is the dominant mediating mechanism explaining the pathway from contingent rewards and transformational leadership to follower performance.

Across these results, we noticed a novel, consistent, and yet counterintuitive pattern, which is that when LMX is included in the models, it is the largest and most predictive pathway (i.e., largest coefficient) explaining the leadership behavior–follower performance relation. Thus, there is initial empirically-based evidence that LMX may be a common underlying mechanism that explains why leadership is related to follower performance across leadership behaviors, perhaps a meta-theoretical principle. A meta-theoretical principle explains a variety of similar relations across a domain, addressing phenomena at a higher level than specific theories (e.g., Pierce & Aguinis, 2013; Richter, 1986).

In Study 1, we were not able to test whether LMX is the primary mediating mechanism in the consideration and initiating structure models because LMX has not been theoretically or empirically emphasized in the leadership literature as a consequence of those leadership behaviors. Accordingly, we conducted follow-up Study 2, in which we meta-analyzed the relation between the two Ohio State leadership behaviors with LMX in order to inductively test whether LMX is the primary mediating mechanism in the relations involving consideration and initiating structure with follower performance. This effort is warranted because if LMX is identified as the most important theoretical mechanism in the models associated with consideration and initiating structure, we would identify a simple and parsimonious, yet counterintuitive and admittedly provocative rationale that explains the relation between leadership behaviors and follower performance across a variety of leadership behaviors. This rationale would be: leadership behaviors lead to follower performance because they increase followers' perceptions of having a good relationship with their leader.

Study 2

Theory and hypotheses

The theorizing process we have engaged in thus far is deductive in nature and the standard approach in organizational behavior research (Aguinis & Vandenberg, 2014). It is a top-down approach that involves an identification of hypotheses based upon theory, which is then followed by hypothesis testing. Inductive research, on the other hand, is a bottom-up approach that begins with finding meaningfulness, tension, conflict, or contradiction, which in turn leads to hypothesis creation and testing based upon the data (Aguinis & Vandenberg, 2014; Shepherd & Sutcliffe, 2011). Although underutilized, inductive theorizing and testing can lead to and is often necessary for theoretical progress (Locke, 2007). Moreover, inductive approaches can improve our ability to prune and refine theories (Aguinis & Vandenberg, 2014). Study 2 adopts an inductive approach in furthering a prediction derived from Study 1 that LMX may be a common underlying mechanism explaining the relation between leadership and follower performance across leadership behaviors. This effort is considered an inductive approach because relations between the Ohio State leadership behaviors and LMX have not been theorized in the leadership literature; however, studies do exist that simultaneously examined these constructs (largely in the form of unpublished dissertations) making meta-analyses possible.

Falling in line with existing research between leadership behaviors and LMX (e.g., Dulebohn et al.,2012), it is reasonable to believe that LMX mediates the relation between the two Ohio State leadership behaviors and follower performance, but each for different reasons. Specifically, when a leader engages in consideration by showing concern and respect for the followers, followers are likely to perceive that they are important to and valued by the leader, enhancing their perceptions of a strong leader–follower relationship. Additionally, when leaders engage in initiating structure by organizing the roles of their followers, followers are likely to perceive that their leader wants them to be successful, or even that only a leader who values the success of a follower would provide initiating structure, which

should also enhance perceptions of a strong leader–follower relationship. In turn, these strong relationships should provide a social and emotional context allowing followers to excel in terms of their performance. Thus, we provide a conceptual representation (Shepherd & Sutcliffe, 2011) of these inductive relations by hypothesizing the following:

> *Hypothesis 5*: In a model that includes (i) consideration as the antecedent variable; (ii) task performance and OCB as outcome variables (i.e., follower performance); and (iii) LMX, follower job satisfaction, satisfaction with leader, role ambiguity, role conflict, and commitment as mediators; the largest relations between consideration and the two follower performance constructs will be the indirect relations associated with LMX.

> *Hypothesis 6*: In a model that includes (i) initiating structure as the antecedent variable; (ii) task performance and OCB as outcome variables (i.e., follower performance); and (iii) LMX, follower job satisfaction, satisfaction with leader, role ambiguity, role conflict, and commitment as mediators; the largest relations between initiating structure and the two follower performance constructs will be the indirect relations associated with LMX.

Method

Original meta-analyses

We conducted two new meta-analyses of the relation between consideration and initiating structure and LMX. We followed the same procedures as in the original meta-analyses in Study 1. For the meta-analysis between consideration and LMX, we identified primary-level studies reporting a correlation between consideration and LMX by searching the same five databases for "consideration" and "leader–member" together in the same searches. These searches resulted in 23 studies, each with only one unique sample (the list of sources is available online as supporting information). For the meta-analysis between initiating structure and LMX, we used the same procedures and the search term "initiating structure." The searches resulted in 22 studies (the list of sources is available online as supporting information). Most of these studies have been unpublished (e.g., dissertations); used consideration and initiating structure as proxies for situational leadership (see Thompson & Vecchio, 2009); or studied consideration, initiating structure, and LMX as separate leadership constructs. As such, they reported correlations between the constructs, but did not specifically theorize relations between them. Results summarizing these two new meta-analyses are included in Table 1.

MASEM

As an outcome of the two new meta-analyses, we expanded the meta-analytically derived correlation matrices for consideration and initiating structure to include their relations with LMX, thus allowing us to assess whether LMX, role ambiguity, role conflict, follower job satisfaction, satisfaction with leader, or general commitment is the best explanation for the consideration/initiating structure-follower performance relations. These matrices are included in Tables 6, 7 and the harmonic mean for the meta-analytically derived correlations was 6230 and 6267, respectively. Study 2 involved a total of 44 unique meta-analytically derived correlations, which were based on 17 published and five original meta-analyses (from either Study 1 or Study 2) and represented a total of 1969 studies and 479 294 observations.

Similar to Study 1, we conducted MASEM which involved testing alternative models as follows. For consideration, we tested a baseline model consisting of direct relations between consideration and each of the plausible mediators (follower job satisfaction, satisfaction with leader, role ambiguity, role conflict, commitment, and LMX), and direct relations between each of the plausible mediators and each of the follower performance constructs. In addition, we tested the following four alternative models: (i) commitment as a consequence of the two satisfaction constructs, the two role constructs, and LMX; (ii) satisfaction constructs as consequences of the role constructs and

Table 6. Meta-analytic correlation matrix for consideration (study 2).

Variable	1	2	3	4	5	6	7	8	9
1 Consideration	—								
2 Leader–member exchange (r, r_c)	.64, .74	—							
k, N	23, 6209								
CI	.54:.75								
3 Role ambiguity (r, r_c)	−.30, −.44[g]	−.34, −.42[a]	—						
k, N	25, 2854	18, 5813							
CI	??:??	−.47:−.37							
4 Role conflict (r, r_c)	−.28, −.42[g]	−.27, −.33[a]	.27, .42[g]	—					
k, N	9, 1709	14, 5480	47, 10217						
CI	??:??	−.38:−.27	??:??						
5 Follower job satisfaction (r, r_c)	.40, .46[h]	.42, .49[a]	−.36, −.46[c]	−.34, −.42[c]	—				
k, N	76, 11374	88, 22520	52, 11287	54, 11851					
CI	??:??	.30:.37	??:??	??:??					
6 Satisfaction with Leader (r, r_c)	.68, .78[h]	.57, .68[a]	−.36, −.53[g]	−.36, −.53[g]	.43, .50	—			
k, N	49, 7871	32, 11195	17, 3619	14, 3440	179, 75114				
CI	??:??	.57:.76	??:??	??:??	.41:.44				
7 General commitment (r, r_c)	.24, .34[k]	.41, .47[a]	−.24, −.32[d]	−.18, −.23[d]	.59, .70[o]	.30, .41[k]	—		
k, N	12, 2642	58, 14208	9, 7040	9, 7040	68, 35282	23, 5236			
CI	??:??	.34:.48	??:??	??:??	.57:.61	??:??			
8 Task performance (r, r_c)	.21, .13[q]	.30, .34[a]	−.15, −.21[p]	−.06, −.07[p]	??, .30[i]	.16, .19[e]	.13, .18[n]	—	
k, N	21, 3808	108, 25322	74, 11698	54, 9910	312, 54471	21, 3630	65, 15511		
CI	??:??	.14:.24	??:??	??:??	.27:.33	??:??	.01:.35		
9 Organizational citizenship behaviors (r, r_c)	.26, .32[l]	.32, .37[f]	??, −.15[b]	??, −.16[b]	.20, .24[j]	.19, .23	.17, .20[j]	.39, .47[m]	—
k, N	8, 3062	50, 9324	24, 6458	22, 6257	22, 7100	36, 8415	17, 5133	24, 7947	
CI	.14:.34	.14:.20	−.17:−.08	−.17:−.08	.22:.26	.15:.23	.17:.24	.37:.40	

Note. k = number of studies; N = combined sample size; r = mean sample-size weighted observed correlations; r_c = mean sample-size-weighted corrected correlation; CI = 95% confidence interval; ?? = figure not reported in original meta-analysis.

Harmonic mean sample size = 6230.

Sources for correlations from previous meta-analyses:

[a] = Dulebohn et al. (2012);
[b] = Eatough et al. (2011);
[c] = Fried et al. (2008);
[d] = Gaertner (1999);
[e] = Iaffaldano and Muchinsky (1985);
[f] = Ilies et al. (2007);
[g] = Jackson and Schuler (1985);
[h] = Judge et al. (2004); [i] = Judge et al. (2001);
[j] = LePine et al. (2002);
[k] = Mathieu and Zajac (1990);
[l] = Organ and Ryan (1995);
[m] = Podsakoff et al. (2009);
[n] = Riketta (2002);
[o] = Tett and Meyer (1993);
[p] = Tubre and Collins (2000);
[q] = Wofford and Liska (1993).

Table 7. Meta-analytic correlation matrix for initiating structure (study 2).

| Variable	1	2	3	4	5	6	7	8	9
1 Initiating structure	—								
2 Leader–member exchange (r, r_c)	.56, .66	—							
k, N	22, 5973								
CI	.47:.65								
3 Role ambiguity (r, r_c)	-.28,-.43[g]	-.34,-.42[a]	—						
k, N	31, 3705	18, 5813							
CI	??:??	-.47:-.37							
4 Role conflict (r, r_c)	-.17,-.27[g]	-.27,-.33[a]	.27, .42[g]	—					
k, N	10, 1839	14, 5480	47, 10217						
CI	??:??	-.38:-.27	??:??						
5 Follower job satisfaction (r, r_c)	.19, .22[h]	.42, .49[a]	-.36,-.46[c]	-.34,-.42[c]	—				
k, N	72, 10317	88, 22520	52, 11287	54, 11851					
CI	??:??	.30:.37	??:??	??:??					
6 Satisfaction with Leader (r, r_c)	.27, .33[h]	.57, .68[g]	-.36,-.53[g]	-.36,-.53[g]	.43, .50	—			
k, N	49, 8070	32, 11195	17, 3619	14, 3440	179, 75 114				
CI	??:??	.57:.76	??:??	??:??	.41:.44				
7 General commitment (r, r_c)	.21, .29[k]	.41, .47[a]	-.24,-.32[d]	-.18,-.23[d]	.59, .70[o]	.30, .41[k]	—		
k, N	14, 3019	58, 14208	9, 7040	9, 7040	68, 35 282	23, 5236			
CI	??:??	.34:.48	??:??	??:??	.57:.61	??:??			
8 Task performance (r, r_c)	.15, .11[p]	.30, .34[a]	-.15,-.21[p]	-.06,-.07[p]	??, .30[j]	.16, .19[e]	.13, .18[n]	—	
k, N	25, 4219	108, 25 322	74, 11698	54, 9910	312, 54 471	21, 3630	65, 15 511		
CI	??:??	.14:.24	??:??	??:??	.27:.33	??:??	.01:.35		
9 Organizational citizenship behaviors (r, r_c)	.24, .31	.32, .37[f]	??,-.15[b]	??,-.16[b]	.20, .24[j]	.19, .23	.17, .20[j]	.39, .47[m]	—
k, N	12, 2105	50, 9324	24, 6458	22, 6257	22, 7100	36, 8415	17, 5133	24, 7947	
CI	.14:.34	.14:.20	-.17:-.08	-.17:-.08	.22:.26	.15:.23	.17:.24	.37:.40	

Note. k = number of studies; N = combined sample size; r = mean sample-size weighted observed correlations; r_c = mean sample-size-weighted corrected correlation; CI = 95% confidence interval; ?? = figure not reported in original meta-analysis.

Harmonic mean sample size = 6267.

Sources for correlations from previous meta-analyses:

[a] = Dulebohn et al. (2012);
[b] = Eatough et al. (2011);
[c] = Fried et al. (2008);
[d] = Gaertner (1999);
[e] = Iaffaldano and Muchinsky (1985);
[f] = Ilies et al. (2007);
[g] = Jackson and Schuler (1985);
[h] = Judge et al. (2004);
[i] = Judge et al. (2001);
[j] = LePine et al. (2002);
[k] = Mathieu and Zajac (1990);
[l] = Podsakoff et al. (2009);
[m] = Riketta (2002);
[n] = Tett and Meyer (1993);
[o] = Tubre and Collins (2000);
[p] = Wofford and Liska (1993).

LMX; (iii) role constructs as consequences of LMX; and (iv) covariation of disturbance terms of similar constructs (follower job satisfaction and satisfaction with leadership, role ambiguity and role conflict, and task performance and OCB) to account for unmeasured common causes. For initiating structure, we identified alternative models that reflected the consideration models above. The best fitting models are included in Figure 2.
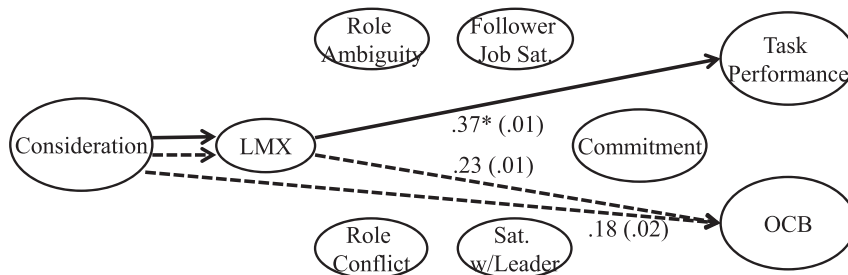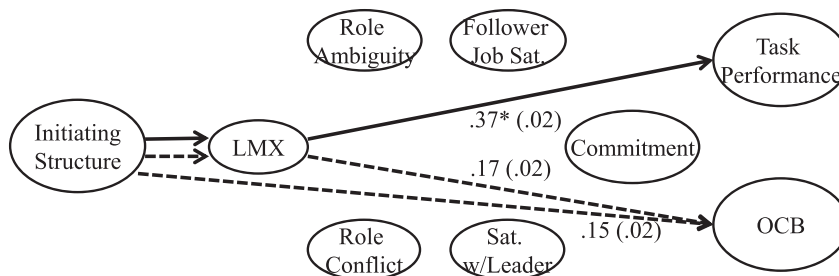

Task Performance (Bolded)		OCB (Dotted)	
Total Relations	.13 (.01)	Total Relations	.32 (.01)
Direct Relation	-.36 (.02)	Direct Relation	.18 (.02)
Total Indirect Relations	.49 (.02)	Total Indirect Relations	.14 (.02)
Model Fit: Fully Saturated			

* = significantly larger than all other positive relations directed at that particular performance outcome based upon post-hoc analyses
Note. The largest dotted path was significantly larger than all other relations directed at OCBs except the second dotted path depicted

Task Performance (Bolded)		OCB (Dotted)	
Total Relations	.11 (.01)	Total Relations	.31 (.01)
Direct Relation	-.25 (.02)	Direct Relation	.15 (.02)
Total Indirect Relations	.36 (.01)	Total Indirect Relations	.16 (.01)
Model Fit: Fully Saturated			

* = significantly larger than all other relations directed at that particular performance outcome based upon post-hoc analyses
Note. The largest dotted path was significantly larger than all other relations directed at OCBs except the second dotted path depicted

Note: We tested paths between all the constructs in the models, but for ease of presentation only the largest paths are identified. Numbers associated with these paths are standardized coefficients (standard errors in parenthesis).

Figure 2. Meta-analytic structural equation modeling results for underlying mechanisms linking leadership and follower performance for consideration and initiating structure (Study 2).

Results and discussion

Consideration

Results based on our inductive theorizing, which include LMX in the model, differed from those based on the deductive approach in Study 1. Regarding task performance, a comparison of results in Figure 1 to those in Figure 2 shows that while the total relation between consideration and task performance stayed the same, the direct relation became more negative ($-.10$ to $-.36$), and the total indirect relations became more positive (.23 to .49), with the largest indirect relation involving LMX (.37). Additionally, when focusing on the relation associated with OCB, the direct relation decreased from .34 to .18 and the total indirect relations increased from $-.02$ to .14, with the largest relation involving the indirect relation through LMX (.23).

Next, we compared the largest mechanisms (i.e., those going through LMX) with all other relations in the model. For the comparisons between consideration–LMX–task performance and all other direct and indirect relations, the consideration–LMX–task performance relation (.37) is significantly larger than all other relations (ranging from $-.36$ to .07) except for the absolute value of the direct relation ($-.36$), which is negative. Thus, LMX is the most important mediating mechanism in the relation between consideration and task performance.

All comparisons between consideration–LMX–OCB (.23) and all other direct and indirect relations (ranging from $-.09$ to .18) were statistically significant except for the direct relation (.18). Thus, these results suggest that in the relation between consideration and OCB, LMX is also the largest mediating mechanism. Additionally, either the direct relation is also important or there may be other mechanisms not included in the model that might help explain this relation. In sum, these results support Hypothesis 5.

Initiating structure

Results regarding the inductively derived model involving initiating structure are displayed graphically in Figure 2. Compared to results from Study 1, and regarding task performance as the outcome, the direct relation changed from being small and positive to being larger and negative (.04 to $-.25$), and the indirect relations became much stronger (.07 to .36), with the largest relation being the indirect relation involving LMX (.37). Additionally, when focusing on the relation associated with OCB, the direct relation decreased from .28 to .15 and the total indirect relations increased from .02 to .16, with the largest relation being the indirect relation involving LMX (.17). Together, these results are very similar to the results associated with the inductively derived consideration model.

Similar to previous models, we conducted comparisons involving the largest relations versus all others. All of the comparisons involving task performance revealed that the initiating structure–LMX–task performance relation (.37) was significantly larger than all other direct or indirect relations in the model (ranging from $-.11$ to .07). This suggests that LMX is indeed the largest mediating mechanism in the relation between initiating structure and task performance. For the comparisons involving OCB, the initiating structure–LMX–OCB relation (.17) was significantly larger than all other relations (ranging from $-.04$ to .14) except the direct relationship (.14). Thus, these results also suggest that in the relation between initiating structure and OCB, LMX is the primary mediating mechanism. Additionally, our results indicate that the direct relation is also important. According to our model, this suggests that the initiating structure–OCB relation is partially mediated through LMX, but it may also suggest that there may be other mechanisms not included in the model that might help explain this relation. Taken together, these results support Hypothesis 6.

Summary

Results from Study 2 offered additional support that LMX is a superior explanation for the underlying mechanism linking leadership behavior and follower performance. Although the role of LMX is not stated explicitly as a mediator in theories associated with the relations involving consideration and initiating structure with follower

performance, we derived hypotheses inductively based on results from Study 1, and they were supported. Thus, results suggest that the strongest pathway from all four leadership behaviors to followers' performance is through LMX.

Two anonymous reviewers observed that there are high meta-analytically derived correlations between multiple mediating mechanisms in our models (e.g., LMX, satisfaction with leader, trust). High correlations between constructs suggest potential issues with discriminant validity (Joseph, Newman, & Sin, 2011), and raise concerns regarding whether one construct, out of several that are interrelated, can be identified as being the primary explanation between leadership behaviors and follower performance. While high correlations between constructs may raise concerns when considering just their bivariate relations, these concerns are less relevant when considering models involving multiple constructs and various different relations. A particular strength of MASEM is that it takes into consideration all relations in the model simultaneously, allowing us to assess models involving complex relations between variables, even if the models include interrelated constructs (Bergh et al., 2016). As indicated, LMX was still identified as being involved in the largest relations between leadership behaviors and follower performance out of all of the mediating mechanisms in the models based on our post-hoc analyses (detailed tables regarding these results, which we described earlier in summary form, are available online as supporting information).

General Discussion

The purpose of our two-study research program was to bring clarity and precision to the theoretical rationales and mechanisms involved in the relations between four leadership behaviors (consideration, initiating structure, contingent rewards, and transformational leadership) and two types of follower performance (task performance and OCBs). We sought to more clearly answer the question: *Why* do positive leadership behaviors improve various types of follower performance? We engaged in a theory pruning and refining effort, using MASEM involving 35 meta-analyses synthesizing a total of 3327 studies and 930 349 observations, which allowed us to combine multiple theoretical mechanisms to empirically determine which were involved in the strongest indirect relations in the leadership behaviors–follower performance relations.

Our pruning and refining effort started with a deductive approach to hypothesis testing, where we hypothesized that certain theoretical mechanisms, those that have been most strongly emphasized in the literature respective to each major leadership behavior, would be involved in the largest indirect relations between the given leadership behavior and follower performance. To our surprise, our deductive analyses provided little support for the hypotheses, suggesting that perhaps the primary theoretical rationales and mechanisms most strongly emphasized in the different leadership domains require revisions. In fact, our results suggested that perhaps LMX is a common explanatory mediating mechanism across the various leadership behaviors. This finding led us to engage in a follow-up inductive approach, in which we assessed whether LMX was the best explanatory mediating mechanism in the relations between consideration and initiating structure and follower performance. Results of these inductive analyses further supported the deductive results, finding that LMX is a simple and parsimonious rationale that explains the relation between leadership behaviors and follower performance, suggesting that relational leadership theory is perhaps the best theoretical explanation, out of many currently in use, for why leadership behaviors lead to follower performance.

To summarize our results from Study 1 and Study 2, Table 8 includes (i) a list of the most emphasized and frequently studied mechanisms used to explain the relations between each leadership behavior and follower performance (i.e., plausible mediating mechanisms); (ii) the few mechanisms associated with each leadership behavior that have been suggested and/or studied as the best or most accurate explanations for why leadership behavior is related to follower performance prior to our study (i.e., our hypothesized mediating mechanisms); and (iii) our results through our deductive (Study 1) and inductive (Study 2) analyses. Results are rather consistent on two accounts.

Table 8. Summary of hypotheses and results from study 1 (deductive approach) and study 2 (inductive approach).

Focal leadership behavior leading to task performance and organizational citizenship behaviors	Plausible mediating mechanisms	Hypothesized mediating mechanisms (associated theory)	Study 1/deductive analysis results (associated theory)	Study 2/inductive analyses results (associated theory)
Consideration	RA, RC, JS, SL, and Comm (inductive: add LMX)	JS and SL (Path-goal theory)	No primary theoretical mechanism	LMX (Relational leadership theory)
Initiating structure	RA, RC, JS, SL, and Comm (inductive: add LMX)	RA and RC (Path-goal theory)	No primary theoretical mechanism	LMX (Relational leadership theory)
Contingent rewards	LMX, RA, RC, DJ, PJ, JS, T, and AC	RA, RC, DJ, and PJ (Motivation and fairness theories)	LMX (Relational leadership theory)	—
Transformational leadership	LMX, JS, T, and AC	T and AC (Social exchange theory)	LMX (Relational leadership theory)	—

AC = affective commitment; C = consideration; Comm = commitment; DJ = distributive justice; JS = follower job satisfaction; LMX = leader–member exchange; PJ = procedural justice; RA = role ambiguity; RC = role conflict; SL = satisfaction with leader; T = trust.

First, the mediating mechanisms widely considered to be the best and most accurate explanations for why the leadership behavior is related to follower performance were not empirically supported through a pruning and refining process. Second, LMX, and along with it, relational leadership theory, was empirically determined to be the best explanation for why leadership behaviors are related to follower performance across four of the most heavily studied leadership behaviors. Our results suggest that perhaps we have discovered a meta-theoretical principle, explaining a common phenomenon across various leadership domains.

Implications for theory

Our results indicating that LMX is the mediating mechanism involved in the largest indirect relations between leadership behaviors and follower performance across the four most heavily studied leadership behaviors were rather unexpected, but surprisingly consistent. Because results were not anticipated, our findings have caused us to reflect upon why LMX plays such a critical role in the leadership behaviors–follower performance relation. One rationale for our consistent findings is rooted in the idea that a positive leader–follower relationship creates a psychologically safe environment by which followers can (i) focus on the task at hand, as opposed to issues related to an unsafe environment, resulting in higher levels of task performance; and (ii) divert their attention away from themselves to their work group or organization as a whole, resulting in higher levels of organizational citizenship behaviors (Kahn, 1990). A different, yet related rationale is rooted in relational leadership theory, which states that the stronger the leader–follower relationship, the greater the influence the leader possesses (Uhl-Bien, 2006). This ability to influence provides the leader with the power to direct the follower to greater levels of task performance and organizational citizenship behaviors (Aguinis, Nesler, Quigley, Lee, & Tedeschi, 1996).

The meta-theoretical rationale uncovered by our studies meets the major criteria for what constitutes good theory by Bacharach (1989): it is parsimonious, clear, and falsifiable; it has utility; and has a broad scope. Specifically, it is parsimonious because it is a simple statement or relation that applies to a wide variety of leadership domains. It is clear because it is easily understandable. It is falsifiable in that empirical research can be conducted to prove it to be

wrong (or a weaker mechanism compared to others—something we have done in our analyses given the available data to date). It has utility in that it can be used by practitioners (as we discuss in the section on Implications for Practice). Also, it has a broad scope in that it can be applied across several leadership constructs as well as types of follower performance. In retrospect, our finding that a good leader–follower relationship is the strongest pathway from leadership behaviors to follower performance seems logical, simple, and perhaps even commonsensical. However, this conclusion seems obvious only now—after we collected and analyzed a large dataset based on 35 meta-analyses involving 3327 primary-level studies and 930 349 observations.

Our results also suggest a shift in theory across the four major leadership behavior domains. For initiating structure and contingent rewards, not only have these two domains rarely relied upon LMX as an important mediating mechanism, but there have been few researchers, if any, who believe that a social factor is the best explanation for why these leadership behaviors are related to follower performance. Specifically, consider the relations between contingent rewards and follower performance. These relations have been theoretically rooted in issues of fairness, equity, exchange, and motivation (Podsakoff et al., 2006), yet our results suggest that contingent rewards operate as a currency indicative of the quality of leader–follower relationship. Thus, for initiating structure and contingent rewards, our results seem to suggest a shift in theory away from fairness and motivation theories toward relationship theories. Additionally, while the consideration and transformational leadership literatures have identified social factors as being important in their relations with follower performance, neither has predominantly relied upon LMX or relational leadership theory. For example, Wang, Oh, Courtright, and Colbert's (2011) meta-analysis relied upon motivation and self-efficacy to explain why transformational leadership leads to follower performance, which have little connection with LMX and relationship theories.

Identifying LMX as a meta-theoretical principle may warrant a shift in how leadership researchers view the LMX and relational leadership literature. Its absence from recently published reviews on leadership suggests that researchers have been losing interest in LMX (Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014; Lord & Dinh, 2014; Yukl, 2012). Yet, our results suggest that such decreased interest should not be the case. Rather, our results suggest that LMX plays a critical role in the success of leadership behaviors, and thus, should warrant increased attention and interest.

While our results do suggest a shift from a broad understanding of why leadership behaviors lead to follower performance, spanning various mechanisms and theories, to something more concise, we emphasize that our results do not suggest that mechanisms and theories other than LMX and relational leadership theory are not important in leadership behaviors–follower performance relations. It would be inappropriate to negate mediating mechanisms that have received empirical support in primary-level studies. For example, through primary-level studies, trust has been identified as a mediating mechanism between both contingent rewards and transformational leadership and follower performance (Podsakoff et al., 1990; Rubin et al., 2010). So, a finding that LMX is the strongest intervening mechanism between leadership behaviors and follower performance does not suggest that leaders should not be concerned about trust, or any other previously identified consequences of leadership behaviors (e.g., fairness, satisfaction, commitment). Rather, LMX may be an antecedent of these other important consequences of leadership behaviors. For example, it is hard to imagine a situation where there is high LMX and low trust. In fact, Martin et al.'s (2016) MASEM found that trust is the best explanation for the relation between LMX and follower performance, although they did not compare the strength of the direct relation with the strength of the indirect relations. In light of this, we conducted additional analyses including LMX as the primary antecedent; distributive justice, procedural justice, job satisfaction, trust, and affective commitment as plausible mediating mechanisms; and task performance and OCBs as the focal consequences. Results of these analyses revealed that the direct relations between LMX and both types of follower performance were significantly stronger than any of the indirect relations. So, while we do not want to negate other obviously important outcomes of leadership, we do believe that our findings clearly identify LMX as the best explanation among all of those we considered in our study, which has important practical implications, as described next.

Implications for practice

Until now, practical implications of leadership behavior research are generally: (i) to the degree that a manager engages in leadership behaviors, he or she will see improvement in follower performance; and (ii) leaders need to be concerned about a variety of follower perceptions, including satisfaction, fairness, motivation, commitment, and trust, because they all underlie the relation between leadership behaviors and follower performance. Our results clarify what leaders need to do and focus on in order to bring out improved follower performance. If leaders want to serve as catalysts for high levels of follower performance, our results suggest that they need to focus on one particular follower perception: LMX, or the improve follower performance, namely: their followers' perception of their relationship with them. In short, our results simplify what leaders need to focus on in an effort to improve follower performance, namely the followers' perceptions of their relationship with their leader.

Additionally, while our results indicate that leader behaviors enhance the leader–follower relationship, our results may also lead to suppositions about the effectiveness of individual leadership behaviors (e.g., providing intellectual stimulation, rewarding based upon performance). More specifically, our results seem to suggest that the effectiveness of any given leadership behavior is likely to be influenced by the followers' perceptions of their relationship with their leader, such that followers with good relationships with their leader will respond more positively in terms of performance to a given leadership behavior, compared to followers with poor relationships with their leader. Together, this logic suggests that leaders should engage in positive leadership behaviors to improve their followers' relationship with them, which, as these perceptions improve, will increase the effectiveness of single leadership behaviors in terms of performance outcomes. Stated differently, to become a leader that guides followers to high levels of performance, one must engage in leadership behaviors to develop positive relationships with followers, and the degree to which this is done, the more effective leadership behaviors become at enhancing performance.

The aforementioned practical implications are further supported by considering the actual difference (i.e., effect size) that the improvement of LMX can have on objective measures of performance across the four different leadership models. Because all coefficients reported in our manuscript are based on SD metric, we needed three types of information to calculate the practical impact of improving a leader's LMX score (Aguinis, Werner, Abbott, Angert, Park, & Kohlhausen, 2010): (i) standard deviation for LMX; (ii) standard deviation for objective measures of performance that have been studied as a consequence of LMX; and (iii) the coefficients between LMX and task performance across our four models. The average standard deviation for LMX across five different studies that used LMX-7 is .85 (Graen, Novak, & Sommerkamp, 1982). A study by Siders, George, and Dharwadkar (2001) examined task performance of sales representatives in five different ways in the medical sales industry: sales volume (in millions), annual sales growth (%), sales volume from new accounts (%), market share (%), and number of new products sold in a given year. The standard deviations for each of these performance metrics were .22, 14.13, 3.77, 7.21, and 9.05, respectively. Using the coefficient between LMX and task performance in each of our models (i.e., consideration: .497, initiating structure: .557, contingent rewards: .238, and transformational leadership: .294), we were able to calculate the consequence that raising the level of LMX by one standard deviation (.85) has on each of the five different types of objective task performance by multiplying the path coefficients with the standard deviation of each objective measure of task performance. Results are included in Table 9.

Table 9 shows that an increase in one standard deviation of LMX results in, on average and *per sales representative*, an \$85 000 increase in sales volume, 5.60 percent increase in annual sales growth, 1.50 percent increase in sales volume from new accounts, 2.86 percent increase in market share, and 3.59 more new products sold, all *in a given calendar year*. Clearly, these numbers represent substantial increases in actual performance per sales representative per year. Additionally, consider the practical implications if we examine the effect across multiple sales representatives (i.e., followers)—not just one. That would represent meaningful increases not only for the leader of those sales representatives, but also for the organization as a whole, all in a space of just one year. Thus, our results suggest that there are tangible and meaningful implications when managers engage in leadership behaviors in such a way that those behaviors increase the followers' perceptions of the leader–follower relationship.

Table 9. Practical implications of increasing LMX by one standard deviation (.85) for various objective performance metrics.

Outcome	Consideration	Initiating structure	Contingent rewards	Transformational leadership	Average
Sales volume (in millions)	0.11	0.12	0.05	0.06	0.09
Annual sales growth (%)	7.02	7.87	3.36	4.15	5.60
Sales volume from new accounts (%)	1.87	2.10	0.90	1.11	1.50
Market share (%)	3.58	4.02	1.72	2.12	2.86
Number of new products sold	4.50	5.04	2.15	2.66	3.59

In addition to practical implications regarding how leaders behave, our results also suggest that changes should be made to how leaders are trained. Much of the training of managers as well as MBA students stemming from leadership research places emphasis on engaging in various behaviors associated with each of the four leadership behaviors. For example, common advice is for leaders to manage rewards in a contingent as opposed to non-contingent manner (e.g., Aguinis, Joo, & Gottfredson, 2013), assuming that it is the nature of how rewards are administered that affects follower performance. Our results suggest that leadership behaviors are effective primarily because they improve the leader–follower relationship. Thus, future executive, as well as business student training, should focus more heavily on this underlying explanatory mechanism: LMX, or the followers' relationship with their leader.

Limitations and future research

First, our results must be interpreted within the context of a methodological challenge regarding the measures used to assess the mediators included in our study. Specifically, measures of follower perceptions of the leader that serve as mediators in our models often include items that may also measure leadership behaviors, which serve as antecedents in our models. For example, an item from the most commonly used measure of LMX, LMX-7 (Scandura & Graen, 1984), resembles a measure of a leader's behavior (e.g., "My supervisor recognizes my potential"). Similarly, items from Liden and Maslyn's (1998) LMX scale include "My manager would defend me to others in the organization if I made an honest mistake," "My manager would come to my defense if I were 'attacked' by others," and "My manager defends (would defend) my work actions to a superior, even without complete knowledge of the issue in question." The same potential confound involving measurement of LMX and its antecedents (i.e., leadership behaviors) holds true for other mediators included in our models. For example, the measure of trust by McAllister (1995) includes the following item: "This person approaches his/her job with professionalism and dedication." The measure of role ambiguity by Rizzo, House, and Lirtzman (1970) includes the item "explanation is clear of what has to be done." The measure of role conflict also by Rizzo et al. (1970) includes the item "I receive an assignment without adequate resources and materials to execute it." Finally, the measure of satisfaction with the leader by Hackman and Oldham (1980) includes the item "How satisfied are you with the amount of support and guidance I receive from my supervisor."

One could make the case that all of these measures of potential mediators in the relation between leadership behaviors and outcomes are to some extent psychometrically contaminated with leadership behaviors, which may lead to inflated correlations because of the overlap in item content across measures (Martinko, Harvey, & Mackey, 2014). Specifically, each of the mediator's measures includes some aspect of leadership behaviors because leaders behave in such ways that they may recognize a subordinate's potential (LMX measure), approach subordinates with professionalism (trust), explain job-related tasks clearly (role ambiguity), provide subordinates with sufficient resources (role conflict), and provide subordinates with support and guidance (satisfaction with the

leader). This measurement confound seems to be endemic in leadership research and is not unique to studies assessing LMX. Moreover, as pointed out by an anonymous reviewer, the items of other mediators may have less overlap with the leadership constructs than does LMX which may be driving the importance of LMX as the key mediator.

Second, a limitation of meta-analytic research is that it relies upon available data. In the case of our study, the data were collected within the context of cross-sectional designs, which limits causal inferences. Clearly, these are design-related challenges that limit our ability to draw strong inferences about causality. However, one way to strengthen our confidence regarding the nature and direction of causal relations is to eliminate alternative explanations for our results (Aguinis & Vandenberg, 2014; Aguinis & Vandenberg, 2014). Specifically, we engaged in testing alternative plausible models (i.e., causal structures), as recommended by several sources (Bergh et al., 2016). Comparing alternative explanations not only increases our confidence regarding causal relations, but it also serves to refine theoretical predictions (Aguinis & Vandenberg, 2014; Aguinis & Vandenberg, 2014). While such comparisons do not necessarily allow us to identify the one best explanation, they do allow us to identify the best explanation after other plausible explanations have been ruled out, suggesting an enhancement to precision and refinement in theory.

Third, another limitation of relying upon meta-analytic data is that we were only able to include constructs that have received a substantial amount of empirical attention, to the point that they have been meta-analyzed. Thus, we were unable to include all possible mechanisms proposed to mediate the relation between a leadership behavior and follower performance. Although we found substantial support for the importance of LMX across the different leadership behaviors, we are not suggesting that the mechanisms that we were unable to include in our study are unimportant. But, our results provide a benchmark by which to compare all other plausible mediating mechanisms. If they cannot empirically perform as well or better than LMX, then they are not likely to be as important in the leadership behaviors–follower performance relation compared to what has been empirically established as being the most important.

Fourth, our results lead to the conclusion that it is crucial for leaders to develop a positive relationship with followers. Thus, we believe it is important for leadership researchers to place increased attention on further unlocking how leaders can build high-quality relationships with followers. For example, future research could address the role of mindfulness and emotional intelligence, which have received relatively little attention with relation to LMX. Specifically, it has been suggested that LMX may mediate the relation between mindfulness (i.e., a present-moment awareness with an observing, non-judging stance) and important employee outcomes (Reb, Narayanan, & Chaturvedi, 2014). Additionally, there is some initial support that LMX mediates the relation between emotional intelligence and important employee outcomes (e.g., turnover intention, job satisfaction), with calls for further research in this area (Jordan & Troth, 2011).

Fifth, we also recognize that there are a number of theories in the leadership domain that suggest that contextual moderators play an important role in the leadership–follower performance relation. Such moderators or boundary conditions could theoretically include tenure of leader–follower relationship, culture of the organization, job of the follower, and gender and/or race of leader and follower, to name a few. In most tests for moderators, product terms are needed and MASEM is no exception. In order to test for moderators in the context of MASEM, it is necessary to input meta-analytically derived correlations between product terms and other variables included in the study. Because most primary-level studies do not report the correlations between product terms and other variables, the data necessary to test for moderators are not available (Aguinis, Beaty, Boik, & Pierce, 2005). While such information is currently not available, we have seen a movement toward increased transparency and better reporting practices in organizational behavior and related fields (e.g., Bettis, Ethiraj, Gambardella, Helfat, & Mitchell, 2016). We hope that future work will be able to test some of these boundary conditions when authors make the necessary information available.

Sixth, also in terms of future research, the approach that we used in the particular leadership behavior–follower performance domain can be used to extract meta-theoretical principles in other areas associated with leadership, but also many other domains including individual as well as team and firm performance. For example, at the individual level

of analysis, there are numerous underlying mechanisms that have been posited as explanations for why organizational commitment leads to individual performance. At the team level of analysis, there are several reasons why various team characteristics are associated with team performance. Also, at the firm level of analysis, there are numerous competing explanations for why different types of resources are associated with firm performance. There seem to be "clouds of fog" in these and many other domains in organizational behavior, and related fields, and adopting our dual deductive and inductive approach, combined with the use of meta-analytic structural equation modeling, seems to be an approach that may be useful for "changing the conversation" in these other research domains.

Finally, also related to the MASEM approach we adopted in our manuscript, making the meta-analytically derived correlation matrices in Tables 2–7 available will allow others to replicate and also extend our analyses. Specifically, given concerns about replicability and research misconduct (e.g., Bedeian, Taylor, & Miller, 2010), making these data available allows others to conduct the exact same analyses we did, thereby increasing confidence in our results and conclusions. Moreover, taken together, these tables reporting approximately 90 meta-analytically derived correlations based on more than 3000 studies and 900 000 observations can serve as input for future MASEM on leadership but also on other domains as well such as trust, justice, commitment, task performance, OCB, and job satisfaction that serve as building blocks for the field of organizational behavior.

Conclusion

There has been a significant amount of research aimed at identifying why leadership behaviors lead to follower performance. While we have learned much from this literature, we now have a plethora of theoretical rationales and mechanism used to explain the leadership behaviors–follower performance relations, suggesting a lack of clarity in our explanations for these relations. We adopted a dual deductive–inductive approach, compiled a large dataset based on 35 meta-analyses involving 3327 primary-level studies and 930 349 observations, and used meta-analytic structural equation modeling to prune and refine the theoretical landscape. We investigated competing theoretical mechanisms that have been relied upon to explain the relations between four major leadership behaviors (i.e., consideration, initiating structure, contingent rewards, and transformational leadership) and two types of follower performance (task performance and OCB). Recognizing that there are methodological limitations of our data sets, results indicated that LMX is the common and strongest mediating mechanism across the leadership behaviors, making it a meta-theoretical principle, which indicates that greater emphasis should be given to relational leadership theory in leadership behaviors–follower performance relations. In short, the leader–follower relationship, as perceived by followers, is what seems to chart the pathway from leadership to follower performance, suggesting an important shift in leadership theory and practice.

Author biographies

Ryan K. Gottfredson is an assistant professor of management in the Mihaylo College of Business at California State University, Fullerton; and a consultant at Gallup, Inc. He has published over 15 journal articles (JOB, JOM, ORM, AMLE), and his research interests include leadership, performance management, employee perceptions, and research methods and analysis.

Herman Aguinis is the Avram Tucker Distinguished Scholar and Professor of Management in the George Washington University School of Business. He has published five books and more than 130 articles addressing human capital acquisition, development, deployment, and research methods and analysis. He is a fellow of the Academy of Management (AOM) and received the AOM Research Methods Division Distinguished Career Award for lifetime contributions.

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