DOES SEEING "EYE TO EYE" AFFECT WORK ENGAGEMENT AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR? A ROLE THEORY PERSPECTIVE ON LMX AGREEMENT

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Despite meta-analytic evidence demonstrating that leader–member exchange (LMX) agreement (consensus between leader and subordinate perceptions) is only moderate at best, research on LMX typically examines this relationship from only one perspective: either the leader's or the subordinate's. We return to the roots of LMX and utilize role theory to argue that agreement between leader and subordinate perceptions of LMX quality has meaningful effects on employee motivation and behavior. In a polynomial regression analysis of 280 leader–subordinate dyads, employee work engagement—and subsequent organizational citizenship behavior (OCB)—was maximized (at each level of LMX quality) when leaders and subordinates were in agreement about the quality of their LMX relationship, but suffered when they did not see "eye to eye." Indeed, situations in which both leaders and subordinates evaluated their relationship as low quality were associated with higher work engagement (and subsequent OCB) than were situations of disagreement in which a single member evaluated the relationship as high quality. Further, this effect was consistent regardless of whether the leader or the subordinate evaluated the relationship highly. We conclude that, to fully understand the implications of our only dyadic leadership theory, we must consider the perspectives of both members of the LMX dyad simultaneously.

Leader–member exchange (LMX) theory posits that leaders develop differentiated relationships with their subordinates that range from high-quality socioemotional relationships with some subordinates to low-quality transactional relationships with others (Liden, Sparrowe, & Wayne, 1997). Derived from role theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964), which suggests that role-making processes result in differentiated role definitions and thus differentiated LMX relationships within work groups (Graen, 1976), LMX theory's core contribution was its explicit emphasis on the unique dyadic relationships that develop between leaders and each of their subordinates rather than on the general effects of leader traits and behaviors. Meta-analyses have confirmed the importance

of LMX, demonstrating that the quality of these dyadic relationships is associated with critical outcomes including work attitudes, job performance, and retention (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007).

Ironically, although the concept of the dyad lies at the heart of LMX theory, true consideration of the dyad has largely been absent from research examining LMX. This is because the vast majority of studies examining the antecedents and consequences of LMX (approximately 90% of the LMX studies identified in the meta-analysis conducted by Sin, Nahrgang, & Morgeson, 2009) have captured evaluations of the relationship from only one side of the dyad (that of either the leader or the subordinate). Although this approach has led to many key insights into the nature of leader–follower relationships, we contend that not considering both sides of the dyad

simultaneously represents an important theoretical and empirical oversight. Indeed, meta-analyses have revealed that a mere 8–13% of the variance in LMX perceptions is shared between leaders and subordinates (Gerstner & Day, 1997; Sin et al., 2009). By focusing on only one perspective, research to date has implicitly assumed that LMX quality assessed from the perspective of one member of the dyad is sufficient to describe the nature of that relationship, generally ignoring whether (and why) disagreement may theoretically and empirically impact important work outcomes. On this point, Krasikova and LeBreton (2012: 741) recently suggested that studying dyadic phenomena (such as LMX) from the perspective of one dyad member is "theoretically deficient."

Thus, in response to recent calls to investigate LMX agreement as a substantive variable (e.g., Dulebohn et al., 2012; Erdogan & Bauer, 2014; Matta & Van Dyne, 2015), we target an important question that has yet to be adequately addressed: To what extent does agreement (vs. disagreement) in perceptions of LMX quality (at various levels) affect important organizational outcomes? To address this question, we return to LMX's theoretical roots (that is, role theory), and derive distinct hypotheses regarding the outcomes of the interplay between LMX agreement and LMX quality. As a proximal motivational outcome, we focus on work engagement (Christian, Garza, & Slaughter, 2011), defined as "a multidimensional motivational concept reflecting the simultaneous investment of an individual's physical, cognitive, and emotional energy in active, full work performance" (Rich, Lepine, & Crawford, 2010: 619). As a more distal behavioral outcome, we focus on organizational citizenship behavior (OCB), defined as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, 1988: 4). We concentrate on these outcomes not only because of their importance to organizations, but also because role theory, in addition to being a useful lens through which to view the LMX literature, has been a useful framework for advancing our understanding of both work engagement (e.g., Kahn, 1990, 1992) and OCB (e.g., Morrison, 1994).

We test our hypotheses using polynomial regression and response surface methodology (Edwards, 2002; Edwards & Parry, 1993), which allows us to examine both LMX quality and LMX agreement simultaneously. This is important, because although researchers have begun to identify antecedents of LMX agreement (e.g., Jackson & Johnson, 2012; Schriesheim, Wu, & Cooper, 2011; Sin et al., 2009), the few studies that have investigated outcomes of LMX agreement have either artificially dichotomized the sample (e.g., Cogliser, Schriesheim, Scandura, & Gardner, 2009; Markham, Yammarino, Murry, & Palanski, 2010; Paglis & Green, 2002) or used difference scores to test for agreement effects (e.g., Abu Bakar & Sheer, 2013; Sherman, Kennedy, Woodard, & McComb, 2012). Unfortunately, both of these approaches have been criticized in the literature for their limitations, including low reliability, discarded information, ambiguous interpretation, confounded results, and unrealistically restrictive and often untested constraints (e.g., Edwards, 1994, 2001; MacCallum, Zhang, Preacher, & Rucker, 2002). Importantly, polynomial regression not only overcomes these empirical limitations, but it also does not restrict an inherently three-dimensional relationship (that is, leader ratings, subordinate ratings, and workplace outcomes) to two dimensions. This facilitates our ability to draw more definitive conclusions about theoretically relevant contrasts (that is, agreement vs. disagreement at different levels of LMX quality, agreement at high levels of LMX quality vs. agreement at low levels of LMX quality, and disagreement when leader ratings are higher than subordinate ratings vs. disagreement when subordinate ratings are higher than leader ratings: Lambert, Edwards, & Cable, 2003).[1]

Overall, examining the extent of agreement in LMX quality is of both theoretical and practical importance. From a theoretical standpoint, the simultaneous interplay of LMX agreement and LMX quality has the potential to challenge and extend current thinking about the dynamics of leader–subordinate relationships. For example, the current consensus is that the perspective of one member of the dyad is sufficient to understand the consequences of LMX quality. However, if agreement between supervisors and subordinates is just as (or more) important than quality, then this could result in a situation in which the consequences for a given evaluation of LMX quality by one member of the dyad vary wildly based on the evaluation of the other member. At the extreme, it could be that the best possible outcomes for an employee perceiving his or her relationship as low quality occur when his or her

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[1] Despite using the terms "LMX agreement" and "LMX disagreement" in our 2×2 matrix to contrast the critical portions of a complex surface plot, we view (and treat empirically) the degree of LMX agreement as a continuous variable.

supervisor also views their relationship in the same, low-quality terms. Similarly, high-quality LMX relationships may be most beneficial when both sides of the dyad perceive the relationship similarly, whereas any disagreement may eliminate the benefits of LMX quality. From a practical standpoint, showing that agreement in LMX is just as (or more) important than quality would suggest that interventions targeted toward ensuring that both sides of the dyad view the relationship similarly would be worthwhile, especially since it is not feasible to expect that supervisors will develop high-quality LMX relationships with every subordinate. Overall, the consideration of agreement in LMX perceptions, in conjunction with LMX quality, has the potential to advance theory, research, and practice on supervisor–subordinate relationships in the workplace.

THEORY AND HYPOTHESES

Since its introduction, role theory has frequently been used to further our understanding of a variety of workplace phenomena—including supervisor–subordinate relationships. Using role theory as a conceptual foundation, Graen (1976; see also Graen & Scandura, 1987) described the development of LMX relationships as a role-making process. That process unfolds across a series of role episodes within a given dyad, whereby the leader communicates expectations to a given follower and, based on the follower's responses, their relationship evolves either into a higher-quality socio-emotional relationship characterized by mutual trust, respect, and obligation, or a lower-quality transactional relationship in which those feelings are not present (Graen & Uhl-Bien, 1995). Following the development of the relationship, roles become relatively routinized and stable (Graen & Scandura, 1987).

Although this description implies that the role-making process unfolds smoothly and culminates in shared perceptions of the quality of the supervisor–subordinate relationship, several stumbling blocks can create disagreement in those perceptions. For example, disagreement can occur because "roles are ambiguously and incompletely specified" (Dienesch & Liden, 1986: 621) and must therefore be defined by members of the dyad themselves. Disagreement can occur because role theory differentiates between sent and received (that is, interpreted) role expectations (Katz & Kahn, 1978), and thus the two might become "misaligned due to the idiosyncrasies of interpersonal communication" (Zohar & Polachek, 2014: 114). Disagreement can occur because subordinates

have differing role identities, and thus differing role needs, desires, and goals (Farmer & Aguinis, 2005), which may or may not be fulfilled by the resources that the leader provides. Further, disagreement may persist (even as social interactions become more frequent) because misalignment in roles is often ignored after the initial role-making process is complete (Schaubroeck, Ganster, Sime, & Ditman, 1993).

Thus, disagreement in perceptions of LMX quality not only appears to be common (see Sin et al., 2009), but also it may, based on this discussion, be systematic and meaningful as opposed to random "noise." In spite of this, we have an extremely limited understanding of whether (and why) the interplay of LMX agreement and LMX quality influences important organizational outcomes. To address this important theoretical question, we propose a two-by-two matrix (see Figure 1) that juxtaposes the quality of LMX ratings—high (socio-emotional) vs. low (transactional)—with the source of those ratings—leader vs. subordinate. Within this matrix, quadrant 1 represents LMX agreement at high levels of LMX quality, quadrant 2 represents LMX agreement at low levels of LMX quality, quadrant 3 represents LMX disagreement where leader ratings of LMX quality are low and subordinate ratings are high, and quadrant 4 represents LMX disagreement where leader ratings of LMX quality are high and subordinate ratings are low.

Based on that matrix, we return to the origin of LMX (role theory) to provide conceptual guidance on the potential consequences of agreement and disagreement. Specifically, we map role theory's notions of role consensus, defined as "[t]he degree to which the person's expectations or perceptions of the role (received role) match the expectations of the role senders" (Latack, 1981: 91), and expectation discrepancies, defined as differences "between the role expectation held by the leader and that received by the member" (Graen, 1976: 1207), onto the concepts of LMX agreement and disagreement, respectively. In the following sections, we make specific contrasts between the quadrants shown in Figure 1, drawing on role theory to describe the theoretical implications of those contrasts for employee work engagement and subsequent OCB.

Role Theory, LMX Agreement, LMX Disagreement, and Work Engagement

Applying the tenets of role theory to differentiate LMX agreement (that is, high–high LMX ratings and low–low LMX ratings: quadrants 1 and 2 of Figure 1) from LMX disagreement (that is, low–high

FIGURE 1
Two-by-Two Matrix Juxtaposing Ratings of LMX Quality with Rating Source

		Leader LMX rating	
		Low LMX Leader views relationship as primarily transactional	**High LMX** Leader views relationship as primarily socio-emotional and going beyond transactions
Subordinate LMX rating	**High LMX** Subordinate views relationship as primarily socio-emotional and going beyond transactions	**Transactional / Socio-emotional expectation discrepancy** Leader and subordinate experience discrepancies in roles, expectations, behaviors, and resource exchanges *(Quadrant 3)*	**Socio-emotional role agreement** Leader and subordinate experience consensus in socio-emotional roles, expectations, behaviors, and resource exchanges *(Quadrant 1)*
	Low LMX Subordinate views relationship as primarily transactional	**Transactional role agreement** Leader and subordinate experience consensus in transactional roles, expectations, behaviors, and resource exchanges *(Quadrant 2)*	**Socio-emotional / transactional expectation discrepancy** Leader and subordinate experience discrepancies in roles, expectations, behaviors, and resource exchanges *(Quadrant 4)*

LMX ratings and high–low LMX ratings: quadrants 3 and 4 of Figure 1), role consensus increases as leader and subordinate perceptions of LMX quality become increasingly similar (either high quality for both parties or low quality for both parties), and expectation discrepancies increase as leader and subordinate perceptions of LMX quality diverge. When a leader and subordinate both perceive LMX to be high quality, consensus and mutual understanding exists between leaders and subordinates surrounding *socio-emotional* roles, expectations, behaviors, and resource exchanges. Similarly, when a leader and subordinate both perceive LMX to be low quality, consensus and mutual understanding exists between leaders and subordinates surrounding *transactional* roles, expectations, behaviors, and resource exchanges. Conversely, as disagreement increases between leader and subordinate perceptions of LMX quality, expectation discrepancies accumulate for leaders and subordinates in terms of their perceived socio-emotional and transactional roles, expectations, behaviors, and resource exchanges.

Role consensus and expectation discrepancies have important consequences for employee work engagement, because roles are a key component of the work engagement concept. Indeed, Kahn (1990, 1992) drew on role theory to elucidate the "self-in-role" process necessary to achieve engagement at

work. Specifically, he posited that engagement is the harnessing of one's self into the work role—physically, cognitively, and emotionally (Kahn, 1990)—which is achieved when employees "feel and are attentive, connected, integrated, and focused in their role performances" (Kahn, 1992: 322). Role theory suggests that, for an interacting set of incumbents, "[t]he more consensus they have on the expectations for their own and the others' positions, the more gratification members of a group will derive from the occupancy of their positions" (Gross, Mason, & McEachern, 1958: 213). Role theory also suggests that discrepancies in expectations produce tension, as well as diminished self-perceptions of competence and effectiveness (Kahn et al., 1964).

Drawing upon these arguments, employees are more likely to be engaged in their work as LMX agreement increases. As consensus increases between leaders and subordinates surrounding the nature of their relationship (regardless of whether that consensus centers on a high-quality LMX relationship or a low-quality LMX relationship), synergies and dyadic understandings emerge that allow employees to feel and become attentive, connected, integrated, and focused on their role. For example, when both a leader and a subordinate see their LMX relationship as socio-emotional (that is, of high LMX quality: quadrant 1), the resources that the leader provides to the subordinate

are consistent with the resources that the subordinate expects to receive from the leader, and research suggests that individuals engage in roles and situations that are consistent with their own cognitions (e.g., Korman, 1970). Similarly, when both a leader and a subordinate see their LMX relationship as transactional (that is, of low LMX quality: quadrant 2), the leader and the subordinate achieve consistency, consensus, and mutual understanding surrounding the "exchange of material necessary for basic completion of work" (Liden, Wayne, & Sparrowe, 2000: 409), and the leader therefore meets the subordinate's transactionally based needs (Cogliser et al., 2009), while otherwise staying out of his or her way. Both of these situations allow the employee to more fully devote his or her physical, cognitive, and emotional resources to the work role, as opposed to devoting those resources to dealing with inconsistencies that manifest themselves in the relationship.

Role theory also suggests that work engagement will decrease as perceptions of LMX quality diverge. When one member of the dyad views the relationship as socio-emotional (that is, of high LMX quality) while the other party views the relationship as transactional (that is, of low LMX quality), expectation discrepancies exist that divert attention, create uncertainty, and consume resources, prohibiting employees from feeling and becoming connected, integrated, and focused on their role. For example, consider a situation in which an employee views his or her relationship with his or her supervisor as incorporating socio-emotional elements, while the supervisor views that relationship as purely transactional (quadrant 3). Regardless of whether the overall relationship discrepancy is directly perceived by both parties, which Graen (1976) suggests may or may not occur, misunderstandings will manifest in the course of repeated interactions that will distance an employee from his or her work role because expectations regarding roles, behaviors, and resource exchanges will not be fulfilled. Indeed, role theory suggests that discrepancies in expectations produce tension, dissatisfaction, anxiety, confusion, and indecision (Kahn et al., 1964), which reduce engagement (Bakker & Leiter, 2010). In sum, these theoretical arguments lead us to predict that work engagement will increase as perceptions of LMX quality become aligned (that is, high LMX agreement, or high–high LMX ratings and low–low LMX ratings: quadrants 1 and 2) and will decrease when they become misaligned in either direction (that is, low LMX agreement, or low–high LMX ratings and high–low LMX ratings: quadrants 3 and 4):

Hypothesis 1. The more agreement (that is, the higher the congruence) between a leader's and subordinate's perceptions of LMX quality, the higher the subordinate's work engagement.

Role Theory and Differentiating the Two Scenarios of LMX Agreement

Having considered the effects of agreement vs. disagreement, we now turn our attention to examining the differences between the quadrants comprising each diagonal. First, we focus on the two quadrants within the agreement diagonal (that is, high–high LMX ratings vs. low–low LMX ratings: quadrant 1 vs. quadrant 2 of Figure 1), because agreement between leaders and subordinates can exist at high or low levels of LMX quality.

Although agreement is generally preferred to disagreement, role theory also suggests that, within situations of LMX agreement, LMX quality should be positively associated with work engagement. This is because dyads who agree at higher levels of LMX quality not only have the benefits of LMX agreement (that is, role consensus; see Gross et al., 1958), but they also have the benefits of LMX quality (Graen & Scandura, 1987). For example, when both parties in the dyad see their relationship as including socio-emotional characteristics, synergies and supportive mutual understandings are created between subordinates, who see themselves as "trusted assistants" (as opposed to "hired hands": Dansereau, Graen, & Haga, 1975), and leaders, who reward their perceived "trusted assistants" with beneficial work resources (Graen & Scandura, 1987).

Indeed, research demonstrates that employee perceptions of LMX quality are associated with employees feeling positive emotions and attitudes toward their jobs (Dulebohn et al., 2012; Gerstner & Day, 1997). Additionally, research demonstrates that high-quality LMX subordinates (in comparison to low-quality LMX subordinates) receive more work-related benefits from leaders, such as negotiating latitude (Graen & Scandura, 1987), desired resources (Wilson, Sin, & Conlon, 2010), and better work characteristics (Basu & Green, 1997), all of which should increase work engagement.

In combination, the balanced dyadic exchange of benefits under conditions of high LMX agreement and high LMX quality (that is, enhanced subordinate attitudes and behaviors in conjunction with enhanced leader delegation of resources) should lead employees to fully harness their selves—physically, cognitively, and emotionally—into their work roles. On this point, meta-analytic data has established a positive relationship between LMX quality and

work engagement (e.g., Christian et al., 2011). We build on these findings by also taking into account the level of LMX agreement between supervisors and subordinates, and proposing that, when contrasting the agreement dyads (that is, high–high LMX ratings vs. low–low LMX ratings: quadrant 1 vs. quadrant 2), work engagement will be at its optimal level when *both* the leader and subordinate perceive the LMX relationship to be of high quality:

> *Hypothesis 2. Subordinate work engagement is higher when a subordinate is in agreement with a leader at a high level of LMX than it is when a subordinate is in agreement with a leader at a low level of LMX.*

Role Theory and Differentiating the Two Scenarios of LMX Disagreement

Having considered the effects of agreement vs. disagreement, and having contrasted the two quadrants within the agreement diagonal (that is, high–high LMX ratings vs. low–low LMX ratings: quadrant 1 vs. quadrant 2 of Figure 1), we now consider the two quadrants within the disagreement diagonal (that is, low–high LMX ratings vs. high–low LMX ratings: quadrant 3 vs. quadrant 4 of Figure 1).

When considering this contrast at first glance, two outcomes seem plausible. First, because subordinates are generally dependent on the leader (Emerson, 1962), with leaders controlling a variety of resources important to the subordinate (Wilson et al., 2010), leader perceptions of LMX quality may dominate and render the subordinate's perspective irrelevant (that is, quadrant 4 disagreement is less detrimental than quadrant 3 disagreement). Alternatively, given that employee attitudes and behaviors are largely driven by their own perceptions (Lewin, 1936), the subordinate's perceptions of LMX quality may be the stronger driver of engagement and subsequent OCB (that is, quadrant 3 disagreement is less detrimental than quadrant 4 disagreement). We again return to role theory to determine which of these outcomes is the most plausible.

In discussing role episodes, Kahn and colleagues (1964) argued that role recipient experiences and subsequent responses (to received roles) are shaped by the recipients' own perceptual and cognitive processes. In situations in which a leader perceives high-quality LMX and a subordinate perceives low-quality LMX, the leader will provide resources to the employee consistent with the role of a "trusted assistant," but the subordinate's experience of, and response to, this sent role will be filtered through his or her own perceptions and cognitions (as a "hired

hand"). Alternatively, in situations in which a leader perceives low-quality LMX and a subordinate perceives high-quality LMX, the leader will provide the subordinate with only the basic resources necessary to complete core tasks, but the subordinate's experience of, and response to, this sent role will again be filtered through his or her own perceptions and cognitions.

Thus, the role sent by leaders should be more distal to the more proximal perceptive and cognitive filters that ultimately influence the experience and behavioral response of the employee. Regarding work engagement specifically, Kahn's (1990) seminal work on the construct also placed a heavy emphasis on the importance of self-perception, again suggesting that an employee's perceptions of LMX quality are more important than the supervisor's. Thus, high-quality LMX resources sent from the leader are likely to do little to mitigate the detrimental effects of expectation discrepancies on work engagement if the employee's belief and expression of the self is that of a "hired hand." Alternatively, the lack of resources associated with a low-quality LMX relationship is likely to be less detrimental to work engagement if the employee's belief and expression of the self is that of a "trusted assistant."

There is some indirect evidence to support these contentions. For example, research has shown that subordinate ratings of LMX quality are more strongly related to subordinate attitudes than leader ratings of LMX quality (Schyns & Wolfram, 2008). In addition, Liden, Erdogan, Wayne, and Sparrowe (2006) found suggestive evidence that one's own LMX serves as a filter through which group-level LMX differentiation is interpreted. Thus, based on the above theory and research, we posit that disagreement (that is, incongruence) is less detrimental to work engagement when the subordinate perceives a higher level of LMX quality than the leader than it is when the leader perceives a higher level of LMX quality than the subordinate (that is, quadrant 3 disagreement is less detrimental than quadrant 4 disagreement):

> *Hypothesis 3. Subordinate work engagement is lower when a leader's perception of LMX quality is higher than a subordinate's than it is when a subordinate's perception of LMX quality is higher than a leader's.*

LMX Agreement, LMX Disagreement, Work Engagement, and OCB

Having described how the interplay of LMX agreement and LMX quality influences a proximal motivational factor—that is, work engagement (Christian

et al., 2011)—we now consider a more downstream, behavioral consequence of that interplay. As noted at the outset, we focus on OCB, not only because of its importance to the workplace, but also because, like work engagement, it can be explained through the lens of role theory, thereby resulting in a cohesive and parsimonious framework for understanding the combined consequences of LMX agreement and LMX quality.

Specifically, we focus our theorizing on organizational citizenship behaviors that benefit *the organization in general* (OCBO) as opposed to organizational citizenship behaviors that benefit *specific individuals in the organization* (OCBI) for several reasons. First, OCBO is driven more by cognition, while OCBI is driven more by affect (Lee & Allen, 2002). This has important consequences for the study of OCB through the lens of LMX, because: (a) OCBI is more likely to be an "expression of employees' affect at work," and is less likely to reflect an employee's deliberate attempt to restore balance in social exchange (Lee & Allen, 2002: 133); and (b) OCBI is more likely to be confounded with other affective predictors of LMX, such as liking of the supervisor.[2] Second, Lee and Allen (2002) suggested that OCBO (as opposed to OCBI) is more likely to be influenced by the characteristics of one's job situation—including leader role sending behavior. Finally, OCBO is more directly beneficial to the leader compared to OCBI (Williams & Anderson, 1991), and thus OCBO is more theoretically relevant to our focus on the supervisor–subordinate dyad. For these reasons, we focus our arguments on OCBO.[3]

Role theory suggests that employees behave in ways that are consistent with how their roles evolve and are defined. Roles may either contract or expand, with employees applying personal resources to meet what they perceive as the task and social demands of their roles (Kahn et al., 1964; Katz & Kahn, 1978). One key way in which roles may evolve and expand is through the inclusion of discretionary behaviors that benefit the organization, but which are not explicitly recognized by the formal reward system (that is,

OCBOs). Although OCBOs are typically perceived as "extra-role behaviors," employees may come to define their roles more broadly, thereby incorporating OCBOs into their repertoire of "in-role behaviors" (Morrison, 1994).

If roles can be broadened to include OCBOs, then a natural question that follows is: Why or when will this broadening of roles occur? Returning to our above arguments on work engagement, we suggest that it is through the positive effects of work engagement that the interplay of LMX agreement and LMX quality will foster OCBOs. As employees immerse themselves more fully into their work roles and become more connected to them, they not only should be more motivated to "step outside the bounds of their formally defined jobs and engage in acts that constitute OCB" (Rich et al., 2010: 620), but they also will be more likely to view such acts as a natural part of their role. On this point, meta-analytic data has indicated that work engagement is positively associated with OCB (Christian et al., 2011).

In sum, given that we have hypothesized effects for LMX agreement and quality with work engagement (Hypotheses 1–3) and work engagement is a proximal antecedent of OCB (Christian et al., 2011), we expect that work engagement will transmit these LMX effects to subordinate OCBO. Indeed, role theory posits that every role episode includes both an experience and a response, and that "the behavior of any organizational performer is the product of motivational forces that derive in large part from the behavior of members of his role set" (Kahn et al., 1964: 35). We thus hypothesize a mediating role for work engagement in the relationship between the effects of LMX agreement and quality on OCBO:

Hypothesis 4. Subordinate work engagement mediates the relationship between the interplay of LMX agreement and LMX quality and OCBO.

METHODS

Sample and Procedure

Students in a junior-level management course at a large Midwestern university, as one option for extra credit, recruited an adult (for example a friend, family member, or colleague) working at least 20 hours per week to serve as the focal employee in our study. Focal employees then recruited their immediate supervisor to serve as an additional data source. Data were collected from both focal employees and their supervisors using online surveys as part of a larger study. All participants in the study were

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[2] This is one potential reason for the larger meta-analytic association between LMX and OCBI ($\rho = .38$) in comparison to OCBO ($\rho = .31$). However, despite the larger magnitude of the correlation reported in Ilies and colleagues' (2007) meta-analysis, the 90% confidence intervals reported (and thus the 95% confidence intervals) did overlap.

[3] Although we have these theoretical reasons to focus on OCBO, we present results for OCBI in the supplemental analysis.

compensated with a small honorarium (US$10) in exchange for their participation. This method of using student contacts to obtain access to employee samples has been used successfully in several previous studies (e.g., Grant & Mayer, 2009; Groth, Hennig-Thurau, & Walsh, 2009; Mayer, Aquino, Greenbaum, & Kuenzi, 2012; Takeuchi, Yun, & Wong, 2011). Data were collected over three separate time periods, and the recruitment method varied slightly across collections. To increase the diversity of jobs included in our sample, the first and third data collections targeted jobs among working adults, and the second targeted jobs among working students (working at least 20 hours per week). Similarly to other studies using polynomial regression and response surface methodology (e.g., Cole, Carter, & Zhang, 2013), we combined the data from the three samples into one in order to increase power (Edwards, 2001). Dummy control variables were added to the analyses to partition any effects resulting from differences across the three data collections.

For the first data collection (29.3% of our sample), the average age of our focal employees was 34 and 55% were female. The average age of their supervisors was 39 and 54% were female. For the second data collection (19.3% of our sample), the average age of our focal employees was 22 and 41% were female. The average age of their supervisors was 33 and 50% were female. For the third data collection (51.4% of our sample), the average age of our focal employees was 41 and 60% were female. The average age of their supervisors was 44 and 44% were female.

To ensure the validity and legitimacy of the collected data, we conducted a variety of quality checks. First, when the extra credit research opportunity was introduced, students were informed that the research team would carefully monitor the data collection and that students would not be eligible to receive extra credit if there were any indication that they had completed the surveys themselves. Second, a member of the research team contacted each research participant to verify their addresses to remit payment. Third, we conducted a comprehensive comparison of survey completion time and Internet Protocol (IP) addresses of every supervisor and employee observation to identify potentially questionable responses (for a similar procedure, see Zapata, Olsen, & Martins, 2013). On the basis of these checks, 15 responses were eliminated prior to analyses owing to concerns about the integrity of the data (for example, employee and supervisor surveys had been completed rapidly over a short period of time, employee and supervisor IP addresses were identical,

employee and/or supervisor IP addresses were from an on-campus location when they should not have been, etc.). In addition to these data quality checks, we also randomly selected 30 supervisors and entered their names into a Google search to confirm that they worked for the company indicated. This spot check resulted in no additional data quality concerns. The final matched sample of employee and supervisor responses after eliminating nonmatching data was 280.

Measures

Employee and supervisor responses were all measured using a five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*).

LMX. As noted by Graen (1976: 1207), discrepancies in expectations regarding the LMX relationship are typically unknown to one or both members of the dyad, and "only an outside observer with access to both sources of information would be in a position to assess this factor." Therefore, to assess *LMX*, supervisors and employees provided their own perceptions of LMX quality using the seven-item LMX-7 scale (Graen & Uhl-Bien, 1995). An example item from this scale is "I would characterize my working relationship with this employee as extremely effective" (*supervisor-rated*), or "I would characterize my working relationship with my supervisor as extremely effective" (*employee-rated*). Coefficient α for the supervisor rating was .83. Coefficient α for the employee rating was .89.

Work engagement. Focal employees rated their *work engagement* using the nine-item scale developed by Schaufeli, Bakker, and Salanova (2006). An example item from this scale is "When I get up in the morning, I feel like going to work." Coefficient α was .90.

OCBO. To assess employee *OCBO*, supervisors rated the focal employee using the eight-item scale developed by Lee and Allen (2002). In addition to the benefits of focusing on OCBO discussed previously, LePine, Erez, and Johnson (2002) suggested that supervisors are best suited to capture OCBO as opposed to OCBI. An example item from this scale is "This employee offers ideas to improve the functioning of the organization." Coefficient α was .89.

Control variables. To control for plausible alternative explanations, we controlled for several variables that are theoretically linked to the relationships of interest (Carlson & Wu, 2012; Spector & Brannick, 2011). In addition to controlling for the slight differences in the data collection methods noted above,

we controlled for demographic similarity (that is, *gender similarity*, *age similarity*, and *ethnic similarity*), because similarity is a key determinant in the development of LMX relationships (Bauer & Green, 1996; Liden, Wayne, & Stilwell, 1993). Gender similarity and ethnicity similarity were operationalized using a dummy variable, with similar coded as "1" and dissimilar coded as "0". Age similarity was operationalized as the absolute difference between the supervisor's and subordinate's ages.[4] Additionally, consistent with Chen, Lam, and Zhong (2007), we controlled for *dyadic tenure* (in years), which was reported by the supervisor. We also controlled for *supervisor-rated liking* using the four-item measure developed by Wayne and Ferris (1990), because liking is a key determinant in the development of LMX relationships (Liden et al., 1993; Wayne, Shore, & Liden, 1997). Finally, we controlled for the focal employee's *conscientiousness* using the instrument developed by Saucier (1994), because meta-analytic evidence demonstrates that conscientiousness is positively associated with LMX (Dulebohn et al., 2012), work engagement (Christian et al., 2011), and OCB (Hoffman, Blair, Meriac, & Woehr, 2007; LePine et al., 2002; Organ & Ryan, 1995), and thus is a potential confound.[5]

Analysis

In order to test Hypotheses 1–3, we used polynomial regression and response surface methodology (Edwards, 2002; Edwards & Parry, 1993). Specifically, the mediator variable (work engagement) was regressed on the control variables, as well as the five polynomial terms—b_1 LMX (supervisor-rated), b_2 LMX (employee-rated), b_3 LMX^2 (supervisor-rated), b_4 LMX (supervisor-rated) $\times$ LMX (employee-rated), b_5 LMX^2 (employee-rated)—or, in other words, we estimated the following equation (to simplify, we omitted all control variables):

$$M = b_0 + b_1 S + b_2 E + b_3 S^2 + b_4(SE) + b_5 E^2 + e$$

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[4] We assessed age similarity as an absolute difference score to save degrees of freedom and because age similarity was not a substantive variable in our analysis. However, we also tested the model controlling for age similarity using the interaction term approach (e.g., Riordan & Shore, 1997). The results of all hypothesis tests using the interaction term approach for age similarity were identical to the results reported.

[5] We also reran our analyses without control variables and the results of the hypotheses tests were identical to the results reported with control variables.

where M represents the mediator (that is, work engagement), and S and E are supervisor-rated and employee-rated LMX quality, respectively.

To eliminate nonessential multicollinearity and facilitate the interpretation of results, we mean-centered supervisor-rated (S) and employee-rated (E) LMX quality before calculating the three second-order polynomial terms (Aiken & West, 1991). Following recommendations of Edwards and Parry (1993), we then used the regression coefficients to plot the three-dimensional response surface in which supervisor-rated (S) and employee-rated (E) LMX quality were plotted on the perpendicular horizontal axes, and employee work engagement (M) was plotted on the vertical axis (for recent examples, see also Cole et al., 2013; Edwards & Cable, 2009; Lambert, Tepper, Carr, Holt, & Barelka, 2012; Zhang, Wang, & Shi, 2012).

As Edwards and Cable (2009) describe, there are three key features of the response surface that provide evidence for a congruence effect, and we use these features to test Hypotheses 1 and 2. The first feature involves the curvature of the incongruence line, and this feature is necessary to support a congruence effect (Cole et al., 2013; Edwards & Cable, 2009). Specifically, in order to support a congruence effect (that is, Hypothesis 1), the curvature along the incongruence line must be negative (that is, an inverted U-shape), such that the dependent variable (work engagement) decreases when supervisor-rated (S) and employee-rated (E) LMX quality differ from each other in either direction. To test this feature, we examined whether the curvature along the incongruence line (the line where $S = -E$, calculated as $b_3 - b_4 + b_5$) was negative and significant using procedures for testing linear combinations of regression coefficients (Cohen & Cohen, 1983; Edwards & Parry, 1993).

The second feature is the ridge representing the peak of the response surface, and this feature can provide additional support for a congruence effect (that is, Hypothesis 1: Cole et al., 2013; Edwards & Cable, 2009). Specifically, the ridge describing the peak of the response surface should run along the congruence line ($S = E$) such that the dependent variable (work engagement) is maximized at the point of congruence at each and every level of supervisor-rated (S) and employee-rated (E) LMX quality (Edwards & Cable, 2009). This condition is achieved when the ridge of the response surface (that is, the first principal axis) is located along the congruence line, and thus has a slope (p_{11}) of 1 and an intercept (p_{10}) of 0 (Edwards, 2002; Edwards &

Parry, 1993). Testing this feature involves a nonlinear combination of regression coefficients from our polynomial regression. Following recent empirical work (e.g., Cole et al., 2013; Edwards & Cable, 2009), we used 10,000 bootstrapped samples to construct 95% bias-corrected confidence intervals (CIs) for p_{11} and p_{10} (see also Edwards, 2002; Edwards & Parry, 1993). This condition provides a means of strengthening the evidence for the hypothesized congruence effect (that is, Hypothesis 1), because it "ensures that the dependent variable is maximized when ... values are congruent" (Edwards & Cable, 2009: 660). In sum, support for Hypothesis 1 hinges on these first two features of the response surface.

The third and final feature is the slope of the congruence line, and this feature determines whether the surface along the congruence line ($S = E$) is flat or varies. Specifically, to show that the dependent variable (that is, work engagement) is higher for congruence (that is, agreement) at high levels of LMX quality than it is for congruence (that is, agreement) at low levels of LMX quality (that is, Hypothesis 2), the slope of the congruence line ($S = E$) must be positive.[6] To test this feature, we examined whether the slope along the congruence line (the line where $S = E$, calculated as $b_1 + b_2$) was positive and significant using procedures for testing linear combinations of regression coefficients (Cohen & Cohen, 1983; Edwards & Parry, 1993). Hypothesis 2 hinges on this third feature of the response surface.

In addition to the three key features of the response surface for testing congruence effects, an additional test can be conducted to test the asymmetrical incongruence effect posited in Hypothesis 3. Specifically, to show that the dependent variable (that is, work engagement) is higher when employee-rated LMX quality is higher than supervisor-rated LMX quality than it is when supervisor-rated LMX quality is higher than employee-rated LMX quality (that is, Hypothesis 3), following the approaches used by Cole and colleagues (2013) and Zhang and

colleagues (2012), we calculated the lateral shift quantity ($[b_2 - b_1] \div [2 \times (b_3 - b_4 + b_5)]$). The lateral shift quantity indicates the magnitude and direction of a lateral shift of the response surface along the incongruence line (Atwater, Ostroff, Yammarino, & Fleenor, 1998; Cole et al., 2013). A negative lateral shift quantity would provide evidence supporting Hypothesis 3. We used 10,000 bootstrapped samples to construct 95% bias-corrected CIs to test whether the lateral shift quantity was statistically significantly different from 0 (Cole et al., 2013). As suggested by an anonymous reviewer, Hypothesis 3 can also be tested with the slope of the incongruence line. Specifically, in order to support Hypothesis 3, the slope of the incongruence line must be negative, such that the dependent variable (that is, work engagement) decreases as one moves along the incongruence line from low supervisor-rated (S) and high employee-rated (E) LMX quality to high supervisor-rated (S) and low employee-rated (E) LMX quality. To test the slope of the incongruence line, we examined whether the slope along the incongruence line (the line where $S = -E$, calculated as $b_1 - b_2$) was negative and significant using procedures for testing linear combinations of regression coefficients (Cohen & Cohen, 1983; Edwards & Parry, 1993).

Finally, in order to test the indirect effect of LMX agreement (disagreement) with OCBO via work engagement (Hypothesis 4), we used the block variable approach recommended by Edwards and Cable (2009). Specifically, to estimate the path from the LMX polynomial terms to work engagement (that is, the "α" path in a mediation model), we created a block variable by multiplying the estimated polynomial regression coefficients (from the work engagement regression described above) with the raw data in order to obtain a weighted linear composite (see also Cole et al., 2013; Lambert et al., 2012; Zhang et al., 2012). We then regressed work engagement on the block variable along with the same control variables from the original model. The regression coefficient associated with the block variable represents the path estimate of the relationship between the LMX polynomial terms and work engagement. Because the block variable is computed from the coefficient estimates for the polynomial terms, the variance explained by the equation using the block variable is identical to the variance explained by the equation using the original polynomial terms (Edwards & Cable, 2009; Lambert et al., 2012; Zhang et al., 2012). After calculating the path between the LMX polynomial terms and work engagement (that is, the "α" path in a mediation model), we then calculated

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[6] Typically, to establish a congruence effect, this slope should not be significant; however, this is not a requirement (Cole et al., 2013; Edwards & Cable, 2009). As described by Edwards and Cable (2009: 661), "if the third condition is rejected, meaning the height of the surface varies along the congruence line, but the first two conditions are met, then support can be inferred for a value congruence effect with the caveat that the maximum value of the outcome depends on whether ... values are low or high."

the path from work engagement to OCBO after controlling for the effects of the five polynomial terms and control variables on OCBO (that is, the "β" path in a mediation model). Mediation was tested by bootstrapping the indirect effect using maximum likelihood (ML) estimation in MPlus 6.12 (Muthén & Muthén, 2010).

RESULTS

Means, standard deviations, and correlations are presented in Table 1. Coefficient alphas for each scale are provided on the diagonal. One item of note from the Table 1 is that the correlation between supervisor-rated (S) and employee-rated (E) LMX quality was .25 ($p < .01$), which is comparable to previous meta-analytic estimates (Gerstner & Day, 1997; Sin et al., 2009).

The polynomial regression analysis results are reported in Table 2, and the corresponding surface plot is shown in Figure 2. Hypothesis 1 predicted a congruence effect, such that the greater the agreement between leader and subordinate perceptions of LMX quality, the higher an employee's work engagement. As it pertains to the first feature of the response surface described previously, this reflects a significant negative curvature for the incongruence line ($S = -E$). As shown in Model 2 of Table 2, the three second-order polynomial terms—that is, b_3 LMX^2 (supervisor-rated), b_4 LMX (supervisor-rated) $\times$ LMX (employee-rated), b_5 LMX^2 (employee-rated), or S^2, SE, E^2, respectively—were jointly significant in predicting work engagement ($F = 3.23$, $p < .05$), and the surface along the incongruence line curved downward (curvature [$b_3 - b_4 + b_5$] $= -.56$, $p < .05$). Figure 2 depicts the response surface plot for this polynomial regression where the congruence line ($S = E$) corresponds to the line on the floor of the graph that begins at the near left corner and proceeds to the far right corner, and the incongruence line ($S = -E$) corresponds to the line on the floor of the graph that begins at the far left corner and proceeds to the near right corner. The surface in Figure 2 indicates an inverted U-shaped curve along the incongruence line ($S = -E$), demonstrating that work engagement is higher when supervisors and employees are aligned in their perceptions of LMX quality, while any deviations from the congruence line ($S = E$) are associated with lower work engagement. In sum, these results suggest initial support for Hypothesis 1 by satisfying the first condition for establishing a congruence effect.

To provide further support for our hypothesized congruence effect (Hypothesis 1), we examined the slope and intercept of the response surface ridge

TABLE 1
Means, Standard Deviations, and Correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1 Gender similarity	0.43	0.50	—										
2 Age similarity	10.61	9.92	-0.09	—									
3 Ethnicity similarity	0.22	0.41	-0.08	0.08	—								
4 Dyadic tenure (supervisor-rated)	6.87	7.73	0.11	-0.04	-0.16**	—							
5 Liking (supervisor-rated)	4.49	0.57	-0.08	0.11	0.00	-0.12*	(0.84)						
6 Conscientiousness (employee-rated)	4.22	0.57	0.03	0.00	-0.02	0.11	0.08	(0.89)					
7 LMX (supervisor-rated)	4.26	0.44	-0.10	-0.09	-0.03	0.01	0.52**	0.08	(0.83)				
8 LMX (employee-rated)	4.11	0.62	-0.03	0.05	0.04	-0.04	0.24**	0.15*	0.25**	(0.89)			
9 Work engagement (employee-rated)	3.51	0.70	-0.03	-0.04	0.02	0.07	0.10	0.27**	0.25**	0.31**	(0.90)		
10 OCBO (supervisor-rated)	3.98	0.67	-0.03	-0.09	-0.13*	0.13*	0.36**	0.20**	0.54**	0.20**	0.30**	(0.89)	
11 OCBI (coworker-rated)	4.13	0.47	0.17*	-0.07	-0.07	0.03	0.15	0.07	0.11	0.07	0.28**	0.18*	(0.91)

Note: n = 280 (for all variables except OCBI); reliability coefficients are reported along the diagonal; OCBI is included in a supplemental analysis (n = 139) and was rated by the focal employee's coworkers.

* $p < .05$

** $p < .01$

TABLE 2
Polynomial Regression of Work Engagement on LMX Agreement and Regression of OCBO on Work Engagement

| Variables	Engagement				OCBO					
	Model 1		Model 2		Model 3		Model 4		Model 5	
Constant	3.51**	(0.04)	3.50**	(0.05)	3.98**	(0.03)	3.98**	(0.05)	3.98**	(0.05)
Controls										
Second data collection control	−0.16	(0.12)	−0.13	(0.11)	0.00	(0.10)	0.06	(0.10)	0.07	(0.10)
Third data collection control	0.31**	(0.09)	0.17†	(0.10)	0.41**	(0.08)	0.23**	(0.09)	0.21*	(0.08)
Gender similarity	−0.09	(0.08)	−0.05	(0.08)	−0.08	(0.07)	−0.03	(0.07)	−0.02	(0.07)
Age similarity	0.00	(0.00)	0.00	(0.00)	−0.01*	(0.00)	0.00	(0.00)	0.00	(0.00)
Ethnicity similarity	0.15	(0.10)	0.12	(0.09)	−0.08	(0.09)	−0.12	(0.08)	−0.14†	(0.08)
Dyadic tenure	0.00	(0.01)	0.00	(0.01)	0.01	(0.01)	0.01†	(0.01)	0.01†	(0.01)
Liking	0.15*	(0.07)	−0.02	(0.09)	0.49**	(0.06)	0.21**	(0.08)	0.22**	(0.07)
Conscientiousness	0.33**	(0.07)	0.27**	(0.07)	0.19**	(0.06)	0.16**	(0.06)	0.13*	(0.06)
Polynomial terms										
b_1 Supervisor-rated LMX quality (S)			0.17	(0.12)			0.57**	(0.10)	0.55**	(0.10)
b_2 Employee-rated LMX quality (E)			0.34**	(0.07)			0.05	(0.06)	0.01	(0.07)
b_3 S^2			−0.30†	(0.16)			−0.07	(0.14)	−0.03	(0.14)
b_4 $S \times E$			0.32*	(0.14)			−0.13	(0.12)	−0.17	(0.12)
b_5 E^2			0.07	(0.06)			0.04	(0.05)	0.03	(0.05)
Mediator										
Work engagement									0.13*	(0.05)
R^2	0.15		0.25		0.29		0.37		0.39	
ΔR^2			0.09**				0.08**		0.01*	
Congruence line ($S = E$)										
Slope ($b_1 + b_2$)			0.51**	(0.13)			0.62**	(0.11)		
Curvature ($b_3 + b_4 + b_5$)			0.09	(0.17)			−0.16	(0.15)		
Incongruence line ($S = -E$)										
Slope ($b_1 - b_2$)			−0.17	(0.14)			0.52**	(0.13)		
Curvature ($b_3 - b_4 + b_5$)			−0.56*	(0.26)			0.10	(0.21)		
F for the three quadratic terms			30.23*				0.59			
ΔR^2 _for the three quadratic terms_			0.03*				0.00			

Note: n = 280; unstandardized regression coefficients reported (standard errors in parentheses).
† $p < .10$
* $p < .05$
** $p < .01$

(that is, the first principal axis). As it pertains to the second feature of the response surface described previously, this reflects a principal axis slope (p_{11}) = 1.0 and a principal axis intercept (p_{10}) = 0. Our tests revealed that the first principal axis had a slope (p_{11}) that was not significantly different from 1.0, as the 95% bias-corrected bootstrap CI included 1.0 (.962, 8.275), and an intercept (p_{10}) that was not significantly different from 0, as the 95% bias-corrected bootstrap CI included 0 (−3.217, 1.026). These results provide further support for Hypothesis 1 by satisfying the second condition for establishing a congruence effect. In other words, at each and every level of supervisor-rated (S) and employee-rated (E) LMX quality, work engagement was maximized when supervisor-rated (S) and employee-rated (E) LMX quality were congruent. Overall, our results provide support for Hypothesis 1.

Hypothesis 2 predicted that work engagement is higher when a subordinate is in agreement with a leader at a high level of LMX quality than it is when a subordinate is in agreement with a leader at a low level of LMX quality. As it pertains to the third feature of the response surface described previously, this reflects a significant positive slope for the congruence line ($S = E$). As shown in Model 2 of Table 2, the slope along the congruence line ($S = E$) was significant and positive (slope [$b_1 + b_2$] = .51, $p < .01$), indicating that the high–high congruence condition was associated with higher work engagement than was the low–low congruence condition. The response surface in Figure 2 also confirms that work engagement was higher in the high–high congruence condition (far right corner of the surface plot) in comparison to the low–low congruence condition (near left corner of the surface plot). Thus, the results support Hypothesis 2.

FIGURE 2
Congruence and Incongruence Effects of Leader–Member Exchange with Work Engagement
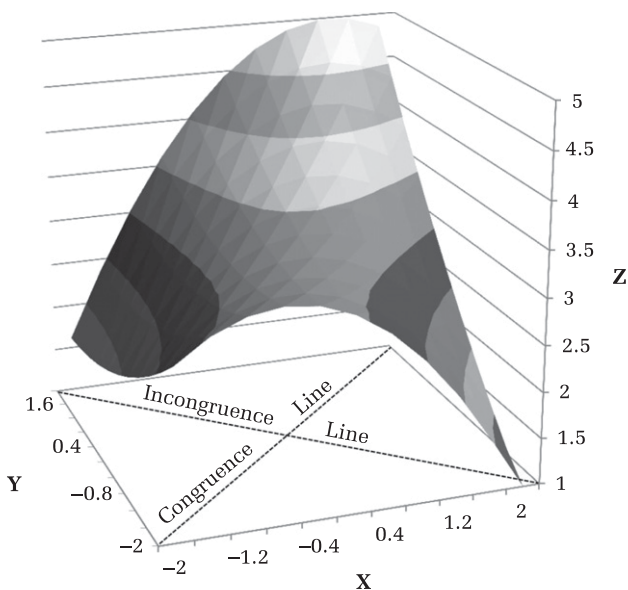
Note: X-axis is supervisor-rated (*S*) LMX quality; Y-axis is employee-rated (*E*) LMX quality; Z-axis is employee-rated work engagement.

Hypothesis 3 predicted an asymmetrical incongruence effect such that work engagement will be lower when a leader's perception of LMX quality is higher than a subordinate's than it is when a subordinate's perception of LMX quality is higher than a leader's. Support for this hypothesis requires that the lateral shift quantity be negative. As predicted, the lateral shift quantity was indeed negative (–.15); however, the 95% bias-corrected bootstrap CI included 0 (–.850, .133), indicating that the lateral shift quantity was not statistically significantly different from 0. As suggested by an anonymous reviewer, we also examined the slope of the incongruence line, because a negative slope would indicate results consistent with Hypothesis 3. As shown in Model 2 of Table 2, the slope along the congruence line ($S = -E$) was negative, but not statistically significant (slope $[b_1 - b_2] = -.17$, n.s.). We therefore failed to find support for Hypothesis 3.

To test the mediating effect of work engagement on the relationship between LMX agreement (disagreement) and OCBO (Hypothesis 4), we calculated the "α" and "β" paths for a mediation model (see Table 3). In Model 2 of Table 2, we used the five polynomial terms to predict work engagement (after accounting for the control variables). As described under "Analysis," we created an LMX polynomial block variable by multiplying the estimated

polynomial regression coefficients with the raw data to obtain a weighted linear composite to estimate the path from the LMX polynomial terms to work engagement (Cole et al., 2013; Edwards & Cable, 2009; Lambert et al., 2012; Zhang et al., 2012). The unstandardized and standardized regression coefficients between the LMX polynomial block variable and work engagement are presented in Table 3. In Model 5 of Table 2, we used work engagement to predict OCBO after controlling for the five polynomial terms and control variables. The unstandardized and standardized regression coefficients between work engagement and OCBO are also presented in Table 3. As shown in Table 3, results of the bootstrapping analysis support Hypothesis 4, as the indirect effect of LMX agreement (disagreement) with OCBO through work engagement was .13, and the 95% bias-corrected bootstrap CI excluded 0 (.022, .248).

To shed further light on the mediating role of work engagement, we calculated the indirect effect at conditional values of supervisor-rated (*S*) and employee-rated (*E*) LMX quality by examining the bias-corrected 95% CI for the indirect effect using 1,000 bootstrap samples at conditional values (that is, high values = 5; low values = 1) of supervisor-rated (*S*) and employee-rated (*E*) LMX quality. The results of these analyses are presented in Table 4. As shown in Table 4, the results testing the indirect effect of LMX agreement and LMX quality on OCBO (via work engagement) at conditional values showed that: (a) the indirect effect for agreement at high LMX quality (that is, quadrant 1) was .176 (CI: .030, .337); (b) the indirect effect for agreement at low LMX quality (that is, quadrant 2) was −.088 (CI: −.169, −.015); (c) the indirect effect for low supervisor-rated (*S*) and high employee-rated (*E*) LMX quality (that is, quadrant 3) was −.244 (CI: −.468, −.041); and (d) the indirect effect for high supervisor-rated (*S*) and low employee-rated (*E*) LMX quality (that is, quadrant 4) was −.330 (CI: −.633, −.056). In addition, Table 4 shows that these conditional indirect effects were significantly different from each other.

Supplemental Analysis

As discussed above, although we had several theoretical reasons to focus our analyses on OCBO, the strong meta-analytic relationship between LMX and OCBI (Ilies et al., 2007) raises the question of whether LMX agreement influences OCBI via work engagement. Although OCBO is likely to benefit the leader more directly than OCBI, if work engagement

TABLE 3
Results from Tests of Indirect Effect of LMX Agreement (Disagreement) on OCBO

Variable	LMX agreement (block variable) to work engagement	Work engagement to OCBO	Indirect effect of LMX agreement to OCBO
	"α" path	"β" path	"$\alpha\beta$"
Unstandardized results	1.00**	0.13*	0.13*
95% bias-corrected bootstrapped CI for indirect effect			(0.022, 0.248)
Standardized results	0.35**	0.13*	0.05*

Note: Significance of bootstrapped indirect effect was determined by examining the bias-corrected 95% CI for the indirect effect using 1,000 bootstrap samples.

* $p < .05$
** $p < .01$

(elicited by LMX agreement and LMX quality) leads to a broadening of work roles in general, it could be that employees do not make such fine-grained distinctions between the targets of their discretionary actions and therefore that LMX agreement also influences discretionary behaviors targeted at individuals within organizations (that is, OCBI) via its effects on work engagement. Thus, in the final and largest of our three samples, we collected ratings of focal employee OCBI from their coworkers, because LePine and colleagues (2002) suggested that coworkers are best suited to capture work behaviors that are categorized as OCBI (whereas supervisors are best suited to capture work behaviors that are categorized as OCBO).

Accordingly, we estimated the "β" path for the OCBI mediation model using an identical analysis to that described previously for OCBO. Furthermore, we examined the bias-corrected 95% CI for the indirect effect of LMX agreement on OCBI via work engagement using 1,000 bootstrap samples and full information maximum likelihood (FIML) estimation

(Enders & Bandalos, 2001; Peugh & Enders, 2004). Full information maximum likelihood estimation uses all available data to model parameter estimates (that is, all available cases for the "α" path and all available cases for the "β" path) and is recommended over listwise deletion with large amounts of missing data (Kam, Morin, Meyer, & Topolnytsky, 2013; see also Boehm, Kunze, & Bruch, 2013; Lanaj, Hollenbeck, Ilgen, Barnes, & Harmon, 2013; Meier & Spector, 2013; Shipp, Edwards, & Lambert, 2009), which is the case here given that OCBI was assessed in the third sample only.

In the final sample, focal employee OCBI was rated by an average of 2.46 coworkers ($SD = .72$) using the eight-item scale developed by Lee and Allen (2002). An example item from this scale is "This employee gives up time to help others who have work or nonwork problems." To assess the interrater agreement among coworker ratings of OCBI, we computed $r_{wg(j)}$ (James, Demaree, & Wolf, 1993) and the intraclass correlation ICC(1) (James, 1982). The mean $r_{wg(j)}$ for OCBI ratings was .94 (median $r_{wg(j)} = .97$), and the

TABLE 4
Conditional Indirect Effects of LMX Quadrants on OCBO

		Conditional indirect effect (95% bootstrapped CI)	Difference of conditional indirect effect			
			Quadrant 1 vs.	Quadrant 2 vs.	Quadrant 3 vs.	Quadrant 4 vs.
Quadrant 1	High S & high E	0.176 (0.030, 0.337)	—			
Quadrant 2	Low S & low E	−0.088 (−0.169, −0.015)	0.264 (0.045, 0.506)	—		
Quadrant 3	Low S & high E	−0.244 (−0.468, −0.041)	0.420 (0.071, 0.805)	0.156 (0.026, 0.298)	—	
Quadrant 4	High S & low E	−0.330 (−0.633, −0.056)	0.506 (0.086, 0.970)	0.242 (0.041, 0.464)	0.086 (0.015, 0.166)	—

Note: S = supervisor-rated LMX quality; E = employee-rated LMX quality; conditional indirect effect determined by examining the bias-corrected 95% CI for the indirect effect using 1,000 bootstrap samples at conditional values (i.e., high values = 5 and low values = 1) for S and E.

ICC(1) for OCBI ratings was .27 ($F = 1.89$, $p < .01$). These results provided support for aggregation (for recommended cutoffs, see LeBreton & Senter, 2008). Coefficient α for the aggregated OCBI scale was .91.

The results of the supplemental analysis are reported in Tables 5–7. In Model 3 of Table 5, we used work engagement to predict OCBI after controlling for the five polynomial terms and control variables. As shown in Model 3 of Table 5, work engagement was positively associated with OCBI ($B = .23$, $p < .01$). The unstandardized and standardized regression coefficient between work engagement and OCBI are also presented in Table 6. As shown in Table 6, results of the bootstrapping analysis provided support for mediation, as the indirect effect of LMX agreement (disagreement) with OCBI through work engagement was .23 and the 95% bias-corrected bootstrap CI excluded 0 (.066, .452).

Again, we calculated the indirect effect at conditional values (that is, high values = 5; low values = 1) of supervisor-rated (S) and employee-rated (E) LMX quality. The results of these analyses are presented in Table 7. As shown in Table 7, consistent with our results for OCBO, the results testing the indirect effect of LMX agreement and LMX quality on OCBI (via work engagement) at conditional values showed that: (a) the indirect effect for agreement at high LMX quality (that is, quadrant 1) was .319 (CI: .090, .616); (b) the indirect effect for agreement at low LMX quality (that is, quadrant 2) was −.160 (CI: −.309, −.045); (c) the indirect effect for low supervisor-rated (S) and high employee-rated (E) LMX quality (that is, quadrant 3) was −.442 (CI: −.855, −.124); and (d) the indirect effect for high supervisor-rated (S) and low employee-rated (E) LMX quality (that is, quadrant 4) was −.599 (CI: −1.158, −.168). In addition, Table 7 shows that these conditional indirect effects were significantly different from each other.

DISCUSSION

For decades, LMX theory has been an influential framework for understanding leadership and its effects on followers. Although numerous theories on leadership have been proposed and subjected to empirical scrutiny over the years, LMX theory is distinct, with its core tenet that leaders develop differential relationships with their followers and that the differences in the quality of those relationships have important consequences for follower outcomes, such as attitudes and behaviors (e.g., Dulebohn et al., 2012). However, theory suggests (e.g., Graen, 1976), and research has consistently shown (e.g., Sin et al.,

2009), that leaders and followers often do not see "eye to eye" in terms of their LMX quality, and thus studies investigating the perceptions of only one member of the dyad may be omitting an important part of the overall LMX story.

In response to calls to treat LMX agreement as a substantive variable (e.g., Dulebohn et al., 2012; Erdogan & Bauer, 2014; Matta & Van Dyne, 2015; Scandura, 1999) and to examine its outcomes (Sin et al., 2009), we drew from role theory and utilized polynomial regression and response surface methodology (Edwards, 2002; Edwards & Parry, 1993) to take a more comprehensive look at the various conditions that arise when leaders and followers agree or disagree regarding the quality of their LMX relationships. In general, this comprehensive look supported our contention that LMX agreement is an important construct in and of itself, explaining additional variance in employee engagement and, consequently, OCBO (as well as OCBI) over and above the effects of LMX quality.

Specifically, the results of our study showed that employees were more likely to be engaged with their work, and subsequently to engage in higher levels of OCBO (and OCBI), when they and their respective leader agreed on the quality of their LMX relationship, and that those outcomes suffered as their perceptions diverged. Importantly, this agreement included situations in which perceived LMX quality was low. Thus, it appears that agreement surrounding a lower-quality LMX relationship that is based more on a *quid pro quo*, economic transaction is indeed associated with higher levels of employee engagement than are situations in which only one party views the relationship as high quality. Viewed through the perspective of role theory (e.g., Kahn et al., 1964), this finding provides plausible evidence that the absence of discrepancies in role expectations and the presence of consensus can not only buffer the detrimental effects of a low-quality LMX relationship, but also actually trump situations in which a high-quality relationship is perceived by only one member of the dyad.

For example, our results demonstrate that when one party rates LMX quality poorly (rating it "1" on a five-point scale), the best possible outcomes, in terms of employee work engagement and OCB, are produced when the other party also rates LMX quality as a "1." This important insight is not only counterintuitive, but it also has been overlooked to date because past approaches to LMX agreement have failed to consider the interplay of LMX agreement and LMX quality simultaneously. Indeed, consider a study that observes a subordinate rating her LMX relationship very highly (at "5" on a five-point scale).

TABLE 5
Supplemental Polynomial Regression of OCBI on LMX Agreement and Work Engagement

Variables	OCBI					
	Model 1		Model 2		Model 3	
Constant	4.13**	(0.04)	4.09**	(0.06)	4.09**	(0.06)
Controls						
Gender similarity	0.16[†]	(0.08)	0.17*	(0.08)	0.17*	(0.08)
Age similarity	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)
Ethnicity similarity	−0.08	(0.12)	−0.08	(0.12)	−0.08	(0.12)
Dyadic tenure	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)
Liking	0.12[†]	(0.07)	0.09	(0.09)	0.09	(0.09)
Conscientiousness	0.05	(0.08)	0.03	(0.08)	−0.02	(0.08)
Polynomial terms						
b_1 Supervisor-rated LMX quality (S)			0.04	(0.14)	0.04	(0.14)
b_2 Employee-rated LMX quality (E)			0.04	(0.08)	−0.04	(0.08)
$b_3 S^2$			0.11	(0.24)	0.19	(0.24)
$b_4 S \times E$			0.03	(0.17)	−0.04	(0.16)
$b_5 E^2$			0.03	(0.07)	0.01	(0.07)
Mediator						
Work engagement					0.23**	(0.07)
R^2	0.06		0.07		0.14	
ΔR^2			0.01		0.07**	
Congruence line ($S = E$)						
Slope ($b_1 + b_2$)			0.08	(0.14)		
Curvature ($b_3 + b_4 + b_5$)			0.17	(0.19)		
Incongruence line ($S = -E$)						
Slope ($b_1 - b_2$)			0.01	(0.18)		
Curvature ($b_3 - b_4 + b_5$)			0.11	(0.36)		
F for the three quadratic terms			0.31			
ΔR^2 _for the three quadratic terms_			0.01			

Note: n = 139; unstandardized regression coefficients reported (standard errors in parentheses).
[†] $p < .10$
* $p < .05$
** $p < .01$

At one extreme, her supervisor could also rate the relationship as a "5," in which case work engagement would be optimized. At the other extreme, her supervisor could rate the relationship as a "1," in which case not only would work engagement suffer, but also the situation would be worse than that in which both the subordinate and supervisor rate their relationship poorly (both as "1"). Accordingly, our results extend theory by suggesting that LMX agreement is just as, if not more, important for employee motivation and behavior than LMX quality.

That being said, our findings do not deny the importance of LMX quality. Within situations of agreement, we found that a high-quality LMX relationship is preferable to a low-quality LMX relationship, at least in terms of being associated directly with employee engagement and indirectly with OCB. Although these findings are in line with much of the existing research to date on LMX, which has demonstrated the benefits of high-quality

LMX relationships to a host of employee outcomes (e.g., Dulebohn et al., 2012; Gerstner & Day, 1997; Ilies et al., 2007), they add an important caveat. Specifically, high-quality LMX relationships are most beneficial when both sides of the dyad perceive their roles and their relationship similarly. If disagreement exists, then a high-quality LMX relationship—from either party's perspective—does little to boost employee work engagement and subsequent OCB.

Finally, our response surface analysis allowed us to examine differences in situations in which leaders and subordinates disagree on the quality of their LMX relationship. Given role theory's emphasis on one's own role perceptions (Kahn et al., 1964), as well as the emphasis of the self in the concept of work engagement (Kahn, 1992), we had reasoned that subordinate perceptions of LMX quality would be more important than leader perceptions of LMX quality in predicting work engagement and subsequent OCBO. Our results for work engagement,

TABLE 6
Supplemental Analysis Results from Tests of Indirect Effect of LMX Agreement (Disagreement) on OCBI

Variable	LMX agreement (block variable) to work engagement "α" path	Work engagement to OCBI "β" path	Indirect effect of LMX agreement to OCBI "αβ"
Unstandardized results	1.00**	0.23**	0.23*
95% bias-corrected bootstrapped CI for indirect effect			(0.066, 0.452)
Standardized results	0.35**	0.29**	0.10*

Note: Significance of bootstrapped indirect effect was determined by examining the bias-corrected 95% CI for the indirect effect using 1,000 bootstrap samples and full information maximum likelihood estimation.
* $p < .05$
** $p < .01$

however, did not support this view. Although we can only speculate on why LMX disagreement was associated with lower work engagement regardless of which member of the dyad perceived the relationship in high-quality terms, this finding suggests an interesting inference. Specifically, it suggests that expectation discrepancies are always detrimental to work engagement. Put simply, it makes no difference who perceives the relationship in high-quality terms.

One potential reason for this effect may be that members of leader–subordinate dyads are, in fact, aware that they do not see "eye to eye" (e.g., Sin et al., 2009), and that this perceived asymmetry in evaluations of the relationship creates tension, uncertainty, and discomfort. Indeed, the notion that people prefer relational symmetry is a core tenet of balance theory (Heider, 1958), and the importance of agreement vs. disagreement in nonwork dyadic relationships (such as in marriages or friendships; see Hill & Palmquist, 1978; White & Hatcher, 1984) has already been established. If such an awareness of LMX disagreement tends to be present in dyads, and

the subsequent tension arising from that awareness impacts employee motivation and behavior more than LMX quality, then this would challenge not only Graen's (1976) assertion that parties are unaware of discrepancies in expectations regarding the LMX relationship, but also LMX theory's predominant focus on quality (as opposed to agreement).

Alternatively, if parties are indeed unaware of their LMX disagreement, it may be that the currency exchanged in the LMX relationship determines which perspective weakens these detrimental effects. For example, Dienesch and Liden (1986) and Liden and Maslyn (1998) drew on role theory and social exchange theory to explain various "currencies of exchange" that individuals bring to LMX relationships, such as contribution, professional respect, loyalty, and affect. It may be that more work-related currencies—such as contribution (Maslyn & Uhl-Bien, 2001)—cause the leader perspective to become more important, because the leader's managerial position provides greater work-related resources than that of the subordinate (Graen & Scandura, 1987), whereas more social

TABLE 7
Supplemental Analysis Results of Conditional Indirect Effects of LMX Quadrants on OCBI

Variable		Conditional indirect effect (95% bootstrapped CI)	Difference of conditional indirect effect			
			Quadrant 1 vs.	Quadrant 2 vs.	Quadrant 3 vs.	Quadrant 4 vs.
Quadrant 1	High S & high E	0.319 (0.090, 0.616)	—			
Quadrant 2	Low S & low E	−0.160 (−0.309, −0.045)	0.479 (0.135, 0.924)	—		
Quadrant 3	Low S & high E	−0.442 (−0.855, −0.124)	0.761 (0.214, 10.469)	0.282 (0.079, 0.544)	—	
Quadrant 4	High S & low E	−0.599 (−10.158, −0.168)	0.918 (0.258, 10.771)	0.439 (0.123, 0.847)	0.157 (0.044, 0.302)	—

Note: S = supervisor-rated LMX quality; E = employee-rated LMX quality; conditional indirect effect determined by examining the bias-corrected 95% CI for the indirect effect using 1,000 bootstrap samples at conditional values (i.e., high values = 5 and low values = 1) for S and E.

currencies—such as affect (Maslyn & Uhl-Bien, 2001)—cause the employee perspective to become more important, because these currencies are less tangible and more subjective, making them more likely to be filtered through the employee's own perceptive and cognitive filters. In sum, when considering the aggregate of LMX currencies, these effects would be neutralized, resulting in no differences across situations in which leaders and subordinates disagree on LMX quality.

Overall, our findings suggest that the "dyad" in "vertical dyad linkage"—that is, LMX (Dansereau et al., 1975)—needs to be revived. Leader–member exchange quality is undoubtedly important, but the full story of LMX cannot be told without also including the concept of agreement. Although the case in which leaders and subordinates agree that their relationship is of high quality greatly simplifies the story (that is, "high-quality LMX is good"), cases in which at least one member of the dyad perceives the relationship to be of low quality quickly complicate that story (that is, "low-quality LMX is not so bad if both parties are in agreement; high-quality LMX is not so good if both parties are in disagreement"). Studies that assess only one person's perspective fail to capture this possibility. Thus, we believe that knowledge of how LMX relationships affect organizational behavior could be advanced if scholars were to pay equal attention to both quality and agreement, which can be accomplished only by looking at both parties simultaneously.

Strengths and Limitations

Although our research design had several strengths, including the use of supervisor and subordinate reports to alleviate concerns over common method variance, as well as the use of a diverse sample of participants from a variety of jobs and organizations, there are some limitations that should be noted. First, although positioning work engagement and OCB (both OCBO and OCBI) as outcomes of LMX is generally consistent with theory and previous research (e.g., Christian et al., 2011; Dulebohn et al., 2012), our design could not establish causality, and we acknowledge that alternative causal orderings are plausible (for example, OCB and work engagement could lead to higher-quality LMX relationships). Moreover, although we were able to examine the effects of LMX agreement and quality on OCBI, we could do so only in one of the three samples.

A second limitation concerns the scope of our model. Although we focused on work engagement and OCB because of their ties to role theory (e.g., Kahn, 1992; Morrison, 1994), other outcomes are

also plausible. For example, LMX has been associated with a variety of other outcomes, including job satisfaction, organizational commitment, perceptions of fairness, and task performance (e.g., Dulebohn et al., 2012; Gerstner & Day, 1997), and work engagement has also been tied to similar outcomes, such as task performance (Christian et al., 2011). Thus, our juxtaposition of LMX agreement and LMX quality may also have relevance to outcomes such as these, and future research could address this possibility. Additionally, we focused our study on employee outcomes of LMX agreement and LMX quality to extend the literature on LMX, which has primarily focused on the employee side (Liden et al., 1997; Wilson et al., 2010). However, the simultaneous consideration of LMX agreement and LMX quality also holds promise for predicting LMX-related supervisor outcomes, such as leader performance (e.g., Deluga, 1998) and career advancement (e.g., Wakabayashi, Graen, Graen, & Graen, 1988).

Finally, in accordance with Graen (1976), our operationalization of LMX agreement was more objective (that is, from the perspective of an outside observer). However, as we noted above, the degree of subjective agreement in LMX quality, as perceived by each member of the dyad, could also be relevant. Although our results supported our primary assertion that LMX agreement is beneficial for engagement and subsequent OCB, research able also to assess agreement more subjectively (such as by asking each member whether the relationship is viewed similarly) could extend our findings in several ways. For example, research could examine whether subjective perceptions of agreement are responsible for our finding that work engagement was lower in situations of incongruence, regardless of who perceived LMX to be of high quality. Research could also examine why and when subjective and objective operationalizations of agreement align. It may be that alignment is more likely as dyads interact with greater frequency (see Sin et al., 2009), because individuals are motivated to reduce tensions arising from perceived imbalances in the relationship (Heider, 1958). It may also be that LMX perceptions are more likely to be subjectively shared when individuals are similar to each other in terms of their personality, values, and general work habits.

Practical Implications and Suggestions for Future Research

In addition to the implications for theory discussed earlier, our results also have implications for practice and future research. In terms of practice, recommendations stemming from research on LMX

tend to stress the importance of developing, to the extent possible, high-quality relationships with multiple subordinates. Our findings certainly continue to support those recommendations; however, we would add that helping leaders and subordinates to see "eye to eye" in their LMX relationship is also likely to have benefits—that is, beyond developing high-quality relationships, leaders should also strive to communicate their view of the relationship with a given subordinate. Leaders, who are in positions of power relative to subordinates, may have an easier time changing the perception of a subordinate from low LMX quality to high LMX quality, thereby realizing the benefits associated with high LMX quality *and* congruence.

Of course, it is unreasonable to expect leaders to develop high-quality LMX relationships with every subordinate whom they oversee. In these cases, it may be especially critical for leaders and subordinates to view the relationship in similar terms. For example, leaders who recognize that they have an enduring, lower-quality relationship with a given subordinate could increase the likelihood that the subordinate shares the same view by clarifying roles and expectations for behavior, changing the relationship from a state of incongruence to a state of congruence. In other words, in some cases leaders may actually benefit from providing a "reality check" to an overly needy or high-maintenance subordinate. Although subordinates may be wary about bringing relational issues with their leader to light, it may be that engaging in certain actions, such as mirroring behaviors originating from the supervisor or otherwise not engaging in behaviors that cross the socio-emotional boundary, signal to the supervisor that the subordinate views the relationship similarly.

In terms of suggestions for future research, we see several ways in which our findings could be extended. In addition to addressing some of the issues noted earlier, such as increasing the scope of the outcomes examined, research able to collect longitudinal data could determine how both agreement and quality in LMX relationships change over time. Although misalignment in roles may persist (Schaubroeck et al., 1993), in situations of LMX quality incongruence, it may be that situations in which the supervisor views the relationship as of high (low) quality, but the subordinate does not, are more likely to move toward a shared, high- (low-) quality LMX relationship because of the supervisor's power to devote socio-emotional (transactional) resources to the relationship, which signal to the employee that the relationship is higher (lower) quality.

In addition, future research could examine boundary conditions of the relationships between LMX agreement and work outcomes. One such boundary condition may be interaction intensity. Although LMX agreement is likely to be higher when leaders and subordinates interact intensely (Sin et al., 2009), it may be that LMX disagreement is especially damaging to employees in this situation because expectations in roles, behaviors, and resource exchanges are more frequently unfulfilled. Another potential boundary condition could be the dyadic performance of leaders and subordinates. In addition to the critical role that performance plays in LMX development (Nahrgang, Morgeson, & Ilies, 2009), congruence in performance between leaders and subordinates may buffer the harmful effects of LMX disagreement, because differences in expectations may matter less when both members of the dyad perform well. Finally, LMX differentiation, which represents variability in LMX quality within work groups (Henderson, Liden, Glibkowski, & Chaudhry, 2009), may influence the effects of LMX agreement at the dyadic level. For example, it may be that when LMX relationships are highly differentiated, LMX agreement becomes especially critical to employees, by giving them a sense of standing within the group.

REFERENCES

Abu Bakar, H., & Sheer, V. C. 2013. The mediating role of perceived cooperative communication in the relationship between interpersonal exchange relationships and perceived group cohesion. *Management Communication Quarterly*, 27: 443–465.

Aiken, L. S., & West, S. G. 1991. *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

Atwater, L. E., Ostroff, C., Yammarino, F. J., & Fleenor, J. W. 1998. Self–other agreement: Does it really matter? *Personnel Psychology*, 51: 577–598.

Bakker, A. B., & Leiter, M. P. 2010. *Work engagement: A handbook of essential theory and research*. New York: Psychology Press.

Basu, R., & Green, S. G. 1997. Leader–member exchange and transformational leadership: An empirical examination of innovative behaviors in leader–member dyads. *Journal of Applied Social Psychology*, 27: 477–499.

Bauer, T. N., & Green, S. G. 1996. Development of leader–member exchange: A longitudinal test. *Academy of Management Journal*, 39: 1538–1567.

Boehm, S. A., Kunze, F., & Bruch, H. 2013. Spotlight on age-diversity climate: The impact of age-inclusive HR practices on firm-level outcomes. *Personnel Psychology*, 67: 667–704.

Carlson, K. D., & Wu, J. P. 2012. The illusion of statistical control: Control variable practice in management research. *Organizational Research Methods*, 15: 413–435.

Chen, Z., Lam, W., & Zhong, J. A. 2007. Leader–member exchange and member performance: A new look at individual-level negative feedback-seeking behavior and team-level empowerment climate. *The Journal of Applied Psychology*, 92: 202–212.

Christian, M. S., Garza, A. S., & Slaughter, J. E. 2011. Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64: 89–136.

Cogliser, C. C., Schriesheim, C. A., Scandura, T. A., & Gardner, W. L. 2009. Balance in leader and follower perceptions of leader–member exchange: Relationships with performance and work attitudes. *The Leadership Quarterly*, 20: 452–465.

Cohen, J., & Cohen, P. 1983. *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Cole, M. S., Carter, M. Z., & Zhang, Z. 2013. Leader–team congruence in power distance values and team effectiveness: The mediating role of procedural justice climate. *The Journal of Applied Psychology*, 98: 962–973.

Dansereau, F., Graen, G. B., & Haga, W. J. 1975. A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role-making process. *Organizational Behavior and Human Decision Processes*, 13: 46–78.

Deluga, R. J. 1998. Leader–member exchange quality and effectiveness ratings: The role of subordinate–supervisor conscientiousness similarity. *Group & Organization Management*, 23: 189–216.

Dienesch, R. M., & Liden, R. C. 1986. Leader–member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11: 618–634.

Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., & Ferris, G. R. 2012. A meta-analysis of antecedents and consequences of leader–member exchange: Integrating the past with an eye toward the future. *Journal of Management*, 38: 1715–1759.

Edwards, J. R. 1994. The study of congruence in organizational behavior research: Critique and a proposed alternative. *Organizational Behavior and Human Decision Processes*, 58: 51–100.

Edwards, J. R. 2001. Ten difference score myths. *Organizational Research Methods*, 4: 265–287.

Edwards, J. R. 2002. Alternatives to difference scores: Polynomial regression analysis and response surface methodology. In F. Drasgow & N. W. Schmitt (Eds.), *Advances in measurement and data analysis*: 350–400. San Francisco, CA: Jossey-Bass.

Edwards, J. R., & Cable, D. A. 2009. The value of value congruence. *The Journal of Applied Psychology*, 94: 654–677.

Edwards, J. R., & Parry, M. E. 1993. On the use of polynomial regression equations as an alternative to difference scores in organizational research. *Academy of Management Journal*, 36: 1577–1613.

Emerson, R. M. 1962. Power-dependence relations. *American Sociological Review*, 27: 31–41.

Enders, C. K., & Bandalos, D. L. 2001. The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling*, 8: 430–457.

Erdogan, B., & Bauer, T. N. 2014. Leader–member exchange (LMX) theory: The relational approach to leadership. In D. Day (Ed.), The Oxford handbook of leadership and organizations: 407–433. Oxford: Oxford University Press.

Farmer, S. M., & Aguinis, H. 2005. Accounting for subordinate perceptions of supervisor power: An identity-dependence model. *The Journal of Applied Psychology*, 90: 1069–1083.

Gerstner, C. R., & Day, D. V. 1997. Meta-analytic review of leader–member exchange theory: Correlates and construct issues. *The Journal of Applied Psychology*, 82: 827–844.

Graen, G. B. 1976. Role-making processes within complex organizations. In M. D. Dunnette(Ed.), *Handbook of industrial and organizational psychology*: 1201–1245. Chicago, IL: Rand McNally.

Graen, G. B., & Scandura, T. A. 1987. Toward a psychology of dyadic organizing. *Research in Organizational Behavior*, 9: 175–208.

Graen, G. B., & Uhl-Bien, M. 1995. Relationship-based approach to leadership: Development of leader–member exchange (LMX) theory of leadership over 25 years—Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, 6: 219–247.

Grant, A. M., & Mayer, D. M. 2009. Good soldiers and good actors: Prosocial and impression management motives as interactive predictors of affiliative citizenship behaviors. *The Journal of Applied Psychology*, 94: 900–912.

Gross, N., Mason, W. S., & McEachern, A. W. 1958. *Explorations in role analysis: Studies of the school superintendency role*. Oxford: Wiley.

Groth, M., Hennig-Thurau, T., & Walsh, G. 2009. Customer reactions to emotional labor: The roles of employee acting strategies and customer detection accuracy. *Academy of Management Journal*, 52: 958–974.

Heider, F. 1958. *Psychology of interpersonal relations*. New York: Wiley.

Henderson, D. J., Liden, R. C., Glibkowski, B. C., & Chaudhry, A. 2009. LMX differentiation: A multilevel

review and examination of its antecedents and outcomes. *The Leadership Quarterly*, 20: 517–534.

Hill, J. P., & Palmquist, W. J. 1978. Social cognition and social-relations in early adolescence. *International Journal of Behavioral Development*, 1: 1–36.

Hoffman, B. J., Blair, C. A., Meriac, J. P., & Woehr, D. J. 2007. Expanding the criterion domain? A quantitative review of the OCB literature. *The Journal of Applied Psychology*, 92: 555–566.

Ilies, R., Nahrgang, J. D., & Morgeson, F. P. 2007. Leader–member exchange and citizenship behaviors: A meta-analysis. *The Journal of Applied Psychology*, 92: 269–277.

Jackson, E. M., & Johnson, R. E. 2012. When opposites do (and do not) attract: Interplay of leader and follower self-identities and its consequences for leader–member exchange. *The Leadership Quarterly*, 23: 488–501.

James, L. R. 1982. Aggregation bias in estimates of perceptual agreement. *The Journal of Applied Psychology*, 67: 219–229.

James, L. R., Demaree, R. J., & Wolf, G. 1993. R_{wg}: An assessment of within-group interrater agreement. *The Journal of Applied Psychology*, 78: 306–309.

Kahn, R. L., Wolfe, D., Quinn, R., Snoek, J., & Rosenthal, R. 1964. *Organizational stress: Studies in role conflict and ambiguity*. New York: Wiley.

Kahn, W. A. 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33: 692–724.

Kahn, W. A. 1992. To be fully there: Psychological presence at work. *Human Relations*, 45: 321–349.

Kam, C., Morin, A. J. S., Meyer, J. P., & Topolnytsky, L. 2013. Are commitment profiles stable and predictable? A latent transition analysis. *Journal of Management*. Published online ahead of print. [DOI: 10.1177/0149206313503010].

Katz, D., & Kahn, R. L. 1978. *The social psychology of organizations*. New York: Wiley.

Korman, A. K. 1970. Toward an hypothesis of work behavior. *The Journal of Applied Psychology*, 54: 31–41.

Krasikova, D. V., & LeBreton, J. M. 2012. Just the two of us: Misalignment of theory and methods in examining dyadic phenomena. *The Journal of Applied Psychology*, 97: 739–757.

Lambert, L. S., Edwards, J. R., & Cable, D. M. 2003. Breach and fulfillment of the psychological contract. A comparison of traditional and expanded views. *Personnel Psychology*, 56: 895–934.

Lambert, L. S., Tepper, B. J., Carr, J. C., Holt, D. T., & Barelka, A. J. 2012. Forgotten but not gone: An examination of fit between leader consideration and initiating structure needed and received. *The Journal of Applied Psychology*, 97: 913–930.

Lanaj, K., Hollenbeck, J., Ilgen, D., Barnes, C., & Harmon, S. 2013. The double-edged sword of decentralized planning in multiteam systems. *Academy of Management Journal*, 56: 735–757.

Latack, J. C. 1981. Person/role conflict: Holland's model extended to role-stress research, stress management, and career development. *Academy of Management Review*, 6: 89–103.

LeBreton, J. M., & Senter, J. L. 2008. Answers to 20 questions about interrater reliability and interrater agreement. *Organizational Research Methods*, 11: 815–852.

Lee, K., & Allen, N. J. 2002. Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *The Journal of Applied Psychology*, 87: 131–142.

LePine, J. A., Erez, A., & Johnson, D. E. 2002. The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *The Journal of Applied Psychology*, 87: 52–65.

Lewin, K. 1936. *Principles of topological psychology*. New York: McGraw-Hill.

Liden, R. C., & Maslyn, J. M. 1998. Multidimensionality of leader–member exchange: An empirical assessment through scale development. *Journal of Management*, 24: 43–72.

Liden, R. C., Erdogan, B., Wayne, S. J., & Sparrowe, R. T. 2006. Leader–member exchange, differentiation, and task interdependence: Implications for individual and group performance. *Journal of Organizational Behavior*, 27: 723–746.

Liden, R. C., Sparrowe, R. T., & Wayne, S. J.1997. Leader–member exchange theory: The past and potential for the future. In G. R. Ferris (Ed.), *Research in personnel and human resources management*: 47–119. Oxford: Elsevier.

Liden, R. C., Wayne, S. J., & Sparrowe, R. T. 2000. An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *The Journal of Applied Psychology*, 85: 407–416.

Liden, R. C., Wayne, S. J., & Stilwell, D. 1993. A longitudinal study on the early development of leader–member exchanges. *The Journal of Applied Psychology*, 78: 662–674.

MacCallum, R. C., Zhang, S. B., Preacher, K. J., & Rucker, D. D. 2002. On the practice of dichotomization of quantitative variables. *Psychological Methods*, 7: 19–40.

Markham, S. E., Yammarino, F. J., Murry, W. D., & Palanski, M. E. 2010. Leader–member exchange, shared values, and performance: Agreement and levels of analysis do matter. *The Leadership Quarterly*, 21: 469–480.

Maslyn, J. M., & Uhl-Bien, M. 2001. Leader–member exchange and its dimensions: Effects of self-effort and other's effort

on relationship quality. *The Journal of Applied Psychology*, 86: 697–708.

Matta, F. K., & Van Dyne, L. 2015. Leader–member exchange and performance: Where we are and where we go from here. In T. N. Bauer & B. Erdogan (Eds.), The Oxford handbook of leader–member exchange: 157–174. New York: Oxford University Press.

Mayer, D. M., Aquino, K., Greenbaum, R. L., & Kuenzi, M. 2012. Who displays ethical leadership, and why does it matter? An examination of antecedents and consequences of ethical leadership. *Academy of Management Journal*, 55: 151–171.

Meier, L. L., & Spector, P. E. 2013. Reciprocal effects of work stressors and counterproductive work behavior: A five-wave longitudinal study. *The Journal of Applied Psychology*, 98: 529–539.

Morrison, E. W. 1994. Role definitions and organizational citizenship behavior: The importance of the employee's perspective. *Academy of Management Journal*, 37: 1543–1567.

Muthén, L. K., & Muthén, B. O. 2010. *Mplus user's guide* (6th ed.). Los Angeles, CA: Muthén & Muthén.

Nahrgang, J. D., Morgeson, F. P., & Ilies, R. 2009. The development of leader–member exchanges: Exploring how personality and performance influence leader and member relationships over time. *Organizational Behavior and Human Decision Processes*, 108: 256–266.

Organ, D. W. 1988. *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.

Organ, D. W., & Ryan, K. 1995. A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, 48: 775–802.

Paglis, L. L., & Green, S. G. 2002. Both sides now: Supervisor and subordinate perspectives on relationship quality. *Journal of Applied Social Psychology*, 32: 250–276.

Peugh, J. L., & Enders, C. K. 2004. Missing data in educational research: A review of reporting practices and suggestions for improvement. *Review of Educational Research*, 74: 525–556.

Rich, B. L., Lepine, J. A., & Crawford, E. R. 2010. Job engagement: Antecedents and effects on job performance. *Academy of Management Journal*, 53: 617–635.

Riordan, C. M., & Shore, L. M. 1997. Demographic diversity and employee attitudes: An empirical examination of relational demography within work units. *The Journal of Applied Psychology*, 82: 342–358.

Saucier, G. 1994. Mini-markers: A brief version of Goldberg's unipolar big-five markers. *Journal of Personality Assessment*, 63: 506–516.

Scandura, T. A. 1999. Rethinking leader–member exchange: An organizational justice perspective. *The Leadership Quarterly*, 10: 25–40.

Schaubroeck, J., Ganster, D. C., Sime, W. E., & Ditman, D. 1993. A field experiment testing supervisory role clarification. *Personnel Psychology*, 46: 1–25.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. 2006. The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66: 701–716.

Schriesheim, C. A., Wu, J. B., & Cooper, C. D. 2011. A two-study investigation of item wording effects on leader–follower convergence in descriptions of the leader–member exchange (LMX) relationship. *The Leadership Quarterly*, 22: 881–892.

Schyns, B., & Wolfram, H.-J. 2008. The relationship between leader–member exchange and outcomes as rated by leaders and followers. *Leadership and Organization Development Journal*, 29: 631–646.

Sherman, K. E., Kennedy, D. M., Woodard, M. S., & McComb, S. A. 2012. Examining the "exchange" in leader–member exchange. *Journal of Leadership & Organizational Studies*, 19: 407–423.

Shipp, A. J., Edwards, J. R., & Lambert, L. S. 2009. Conceptualization and measurement of temporal focus: The subjective experience of the past, present, and future. *Organizational Behavior and Human Decision Processes*, 110: 1–22.

Sin, H. P., Nahrgang, J. D., & Morgeson, F. P. 2009. Understanding why they don't see eye to eye: An examination of leader–member exchange (LMX) agreement. *The Journal of Applied Psychology*, 94: 1048–1057.

Spector, P. E., & Brannick, M. T. 2011. Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods*, 14: 287–305.

Takeuchi, R., Yun, S., & Wong, K. F. E. 2011. Social influence of a coworker: A test of the effect of employee and coworker exchange ideologies on employees' exchange qualities. *Organizational Behavior and Human Decision Processes*, 115: 226–237.

Wakabayashi, M., Graen, G. B., Graen, M., & Graen, M. 1988. Japanese management progress: Mobility into middle management. *The Journal of Applied Psychology*, 73: 217–227.

Wayne, S. J., & Ferris, G. R. 1990. Influence tactics, affect, and exchange quality in supervisor–subordinate interactions: A laboratory experiment and field study. *The Journal of Applied Psychology*, 75: 487–499.

Wayne, S. J., Shore, L. M., & Liden, R. C. 1997. Perceived organizational support and leader–member exchange: A social exchange perspective. *Academy of Management Journal*, 40: 82–111.

White, S. G., & Hatcher, C. 1984. Couple complementarity and similarity: A review of the literature. *The American Journal of Family Therapy*, 12: 15–25.

Williams, L. J., & Anderson, S. E. 1991. Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. ***Journal of Management***, 17: 601–617.

Wilson, K. S., Sin, H. P., & Conlon, D. E. 2010. What about the leader in leader–member exchange? The impact of resource exchanges and substitutability on the leader. ***Academy of Management Review***, 35: 358–372.

Zapata, C. P., Olsen, J. E., & Martins, L. L. 2013. Social exchange from the supervisor's perspective: Employee trustworthiness as a predictor of interpersonal and informational justice. ***Organizational Behavior and Human Decision Processes***, 121: 1–12.

Zhang, Z., Wang, M., & Shi, J. Q. 2012. Leader-follower congruence in proactive personality and work outcomes: The mediating role of leader–member exchange. ***Academy of Management Journal***, 55: 111–130.

Zohar, D., & Polachek, T. 2014. Discourse-based intervention for modifying supervisory communication as leverage for safety climate and performance improvement: A randomized field study. ***The Journal of Applied Psychology***, 99: 113–124.

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