Give and Take: An Episodic Perspective on Leader-Member Exchange

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Research on leader-member exchange (LMX) has predominantly taken a dyadic relationship perspective to understand the differences in overall exchanges across leader-member dyads, while neglecting the within-dyad exchange dynamics across a series of episodic resource transactions. Drawing from the literature on equity and reciprocity principles of social exchange, we develop and test a model of leader-member episodic resource transactions that delineates the momentary psychological mechanism and the boundary condition under which episodic resource contribution surplus generates member subsequent reciprocations. Multilevel polynomial regression analyses of 600 episodic exchange responses from 73 employees show that resource contribution surplus in an exchange episode increased state work engagement immediately following the episode and member resource contribution in the next episode by evoking member momentary sense of obligation to reciprocate. Additionally, the between-dyad LMX relationship quality attenuated these effects by reducing the likelihood to feel obligated to reciprocate due to episodic resource contribution surplus. Our research highlights the microdynamic transaction nature of the exchanges between leaders and members and provides insight into how leader-member dyads exchange resources in episodic interactions.

Keywords: episodic transactions, LMX relationship, resource contributions, state work engagement, momentary sense of obligation to reciprocate

Leadership has been defined as a process in which leaders and members are involved in a series of transactional interactions that over time generate certain types of exchange relationships (Dinh & Lord, 2012; Hollander & Julian, 1969). Building upon role theory and social exchange theory, scholars have developed the leader-member exchange (LMX) construct to explain why leaders establish various relationships with different members and how these

relationships affect member work outcomes (Bauer & Green, 1996; Graen & Uhl-Bien, 1995). Higher-quality LMX relationships, reflecting stronger interpersonal attachment based on accumulated exchanges of valuable resources between leaders and members (Bauer & Erdogan, 2015; Liden, Sparrowe, & Wayne, 1997), engender more positive member responses such as increased job performance, organizational commitment, and helping behaviors toward leaders (see Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012, for a meta-analytic review).

Although the extant LMX literature has provided substantive value in understanding the relationships embedded in the exchanges of leader-member dyads, it has largely overlooked discrete resource transactions that leaders and members concretely perform during episodic work interactions (Cropanzano & Mitchell, 2005; Liden et al., 1997).[1] Cropanzano and Mitchell (2005), in their comprehensive review of social exchange theory, pointed out that it is of critical importance to differ transactions from relationships—transactions refer to a sequence of interdependent episodic resource exchanges that affect the development of exchange rela-

[1] As one type of social exchange, the exchanges of leader-member dyads have two prominent conceptual features: one captures the overall relationship that leaders and members have developed (i.e., *LMX relationship;* Graen & Uhl-Bien, 1995); the other focuses on discrete resource exchanges that leaders and members specifically conduct (i.e., episodic resource transactions; Cropanzano & Mitchell, 2005; Graen & Scandura, 1987). Both conceptual aspects are recognized in our research.

tionships, which, in turn, recasts future episodic transactions. Across those episodic transactions, leader-member dyads dynamically exchange mutually valued resources (Blau, 1964; Emerson, 1976; Graen & Scandura, 1987) and thus, they may experience considerable within-dyad variance in resource transactions that goes beyond the general exchange levels manifested by their given LMX relationships. That is, the exchanged resources between those leader-member dyads with a relatively stable LMX relationship may wax and wane from episode to episode as a function of the variations in leaders' momentary provision of meaningful work and valuable support as well as members' transient return of special favors (Cropanzano & Mitchell, 2005). Echoing this reasoning, Ballinger and Rockmann (2010) suggested that dyadic exchange parties, regardless of their development stages of exchange relationships, might encounter unexpected deviance in reciprocations (i.e., anchoring events) from the other after providing certain amounts of resource contributions.

Given that those episodic transactions are the indispensable ingredients of the exchanges between leaders and members, the relational articulation of LMX may not suffice as a complete theoretical explanation for all exchange patterns that the two parties have experienced. This coarse conceptual treatment might, in turn, cause an unfortunate oversight on the presence of micro-exchange dynamics within leader-member dyads, constraining our knowledge of why and how leaders and members vary resource transactions over prolonged periods of time depending on their LMX relationships. A more comprehensive understanding of the exchanges of leader-member dyads, therefore, warrants a return to studies of tangible resource exchanges that they conduct at episodic work interactions (Bauer & Erdogan, 2015; Liden & Maslyn, 1998). This return takes place with a new conceptual and empirical spin: rather than investigating the single stimulus-response pattern of accumulated exchanges with a between-dyad static approach, we need to investigate a set of episodic resource transactions to capture within-dyad exchange fluctuations that leaders and members display from moment to moment (Cropanzano & Mitchell, 2005; Liden et al., 1997).

Moreover, the need for investigations on within-dyad microexchange dynamics is likely strongest when considering the question of how the LMX relationship, as a hallmark of the overall quality of past exchanges, shapes future discrete transactions (Cropanzano & Mitchell, 2005). Relationships and transactions are a theoretically connected tandem in social exchange that necessitates a conceptual integration in LMX research (Sparrowe & Liden, 1997) but has so far received little scholarly attention, making us agnostic

about the potential pitfalls of the LMX relationship in episodic transactions of which leaders should be aware for maintaining effective exchanges across members. As such, exploring resource transaction dynamics under differing conditions of LMX relationships has meaningful theoretical value because doing so provides a finer-grained view of the notion that "relationships alter the nature of exchanges" (Cropanzano & Mitchell, 2005; p. 888). Pragmatically, studying transactions and relationships jointly could help managers and employees learn how to better manage the discrete exchanges with the other party at different stages of relationship development and thus, create more mutually beneficial exchange interactions.

In this research, we take a more granular approach to investigating episodic resource transactions that involve the giving and taking of resources from both leaders and members. We argue that in each episodic resource transaction, members assess resource contributions from two parties and judge whether they have reached a condition of resource contribution surplus, which describes that members have gained more from than they have contributed to leaders (Buunk, Doosje, Jans, & Hopstaken, 1993; Flynn, 2003). Drawing on the equality and reciprocity principles of social exchange (Adams, 1965; Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001), we propose that the surplus condition in an episodic transaction would lead members to feel a momentary obligation to reciprocate, which, in turn, increases their state work engagement immediately after this episode and resource contributions in the next episode. Moreover, LMX relationship quality provides an important relational context for this episodic transaction pattern by attenuating the likelihood to experience momentary obligation to reciprocate due to resource contribution surplus (Dulac, Coyle-Shapiro, Henderson, & Wayne, 2008). Figure 1 depicts our theoretical model. To capture within-dyad exchange dynamics across episodes, we conducted a field study using an event-contingent version of experience sampling methodology (ESM; Bolger, Davis, & Rafaeli, 2003).

Our research makes three primary contributions. First, our research refines the knowledge of the exchanges between leaders and members by exploring their discrete resource transactions. Despite the fundamental role of episodic transaction in social exchange, past LMX research has largely neglected it and coarsely treated the relationship as overarching guidance in understanding how one party gives to and takes from the other in general (Cropanzano & Mitchell, 2005; Liden et al., 1997). By disentangling within-dyad transaction variance from the generalized exchange level, we suggest that as transacted resources rise and fall
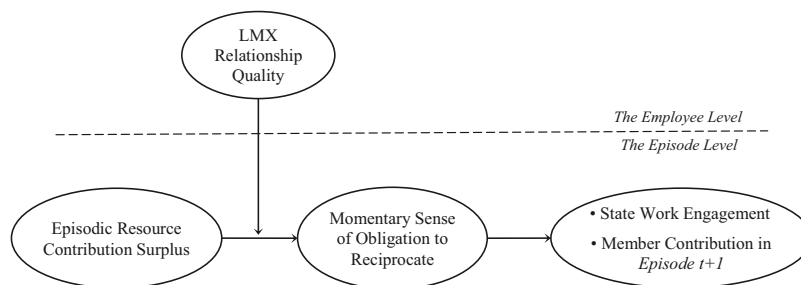

Figure 1. Theoretical model of leader-member episodic exchanges.

across episodes, leader-member dyads present substantial within-dyad microexchange dynamics. More importantly, by capturing iterative episodic transactions, we reveal that their exchange pattern at the episode level may unfold in a disparate or even opposite fashion compared with that at the leader-member dyad level, thereby providing a solid foundation for advancing the LMX and broad social exchange literatures.

Moreover, we build theory by integrating the relational and transactional aspects of social exchange to study how the given exchange relationships shape leader-member dyads' episodic transactions. We propose that members under high-quality LMX relationships are less likely to perform immediate reciprocations in responding to the positive imbalance of episodic exchanges, because they focus on long-term overarching reciprocity and thus tend to feel less obligated to do so (Uhl-Bien & Maslyn, 2003). This proposition reveals an empirically counterintuitive but theoretically plausible reality, shedding light on why and how relationships affect the nature of future exchanges.

Finally, our research adds to the knowledge of the temporal nature of consequences of episodic resource transactions by studying their immediate and enduring effects. We argue that an episodic transaction not only instantaneously shapes members' state work engagement but also carries forward to influence their resource contribution in the following episode. This provides a more accurate view for the role of temporality in social exchange (Mitchell & James, 2001). Additionally, our research takes a social exchange perspective to explore how work-related events shape employees' state work engagement, extending prior research that has been surprisingly consistent in drawing on resource-based regulatory frameworks (Bakker & Demerouti, 2007; Baumeister, Bratslavsky, Muraven, & Tice, 1998; Hobfoll, 2001) to study antecedents of work engagement. This is an important contribution because we move beyond personal resource perspective, arguing that a sense of obligation entailed by social exchange rules can also drive employees to display high work engagement transiently. We thus complement emerging theoretical understanding on and empirical evidence of momentary work engagement (Bakker, 2014; Sonnentag, Dormann, & Demerouti, 2010).

Theoretical Background and Hypotheses

Resource Transactions and Microexchange Dynamics Within Leader-Member Dyads

Although most studies have conceptualized LMX as a relationship quality indicator (Bauer & Green, 1996; Graen & Uhl-Bien, 1995), the inherent nature of LMX is the dynamic transactions of valuable resources that benefit both leaders and members across episodes (Bernerth, Armenakis, Feild, Giles, & Walker, 2007; Liden & Maslyn, 1998). Building on the resource theory of social exchange (Foa & Foa, 1974), Graen and Scandura (1987) specified that episodic transactions of leader-member dyads involve six domains of work-related resources, including tasks, information, latitude, support, attention, and influence. Leaders episodically give members valuable resources such as constructive task information, professional advice, or personal support (i.e., leader contribution; Liden & Maslyn, 1998). In return, members give leaders beneficial resources by providing a "grapevine," presenting well-performed tasks, or providing personal favors

(i.e., member contribution; Wilson, Sin, & Conlon, 2010). The equity principle of social exchange indicates that leader-member dyads are most comfortable when they perceive that they have contributed roughly equal to what they have received in episodic transactions; otherwise, they are distressed and motivated to restore equity (Adams, 1965; Hatfield, Salmon, & Rapson, 2011). The reciprocity principle further suggests that positive imbalance conditions of episodic transactions entail unspecified obligations to reciprocate, driving leaders or members who have received extra resources to compensate in subsequent episodes (Eisenberger et al., 2001; Gouldner, 1960).

Although prior longitudinal studies have demonstrated the long-term dynamics in LMX relationship (e.g., Bauer & Green, 1996; Liden, Wayne, & Stilwell, 1993; Nahrgang, Morgeson, & Ilies, 2009), the exchanges of leader-member dyads also vary on a considerably shorter timescale due to the fluctuations in the value and weight of resources that they contribute episodically (Liao, Wu, Song, Li, & Liu, 2015). Recent leadership dynamic studies provide empirical evidence for this reasoning. Schilpzand, Houston, and Cho (2017), for example, found that members vary in their momentary provision of constructive work suggestions and pursuit of innovative performance as a return for leaders' fluctuations in granting job latitude. Likewise, Tepper et al. (2018) showed that members present substantial within-person variance in taking extra work responsibilities in the afternoon in return for receiving the changing attention, support, and influence for leaders in the morning. One noteworthy aspect is that findings in both studies are based on data from employees at different tenure stages with leaders. Taken together, this stream of research reveals the meaningful microexchange dynamics within leader-member dyads irrespective of their LMX relationships.

Episodic Contribution Surplus and Momentary Sense of Obligation to Reciprocate

Episodic resource contribution surplus captures the positive imbalance condition of episodic transactions in which members have gained more benefits from than what they have contributed to leaders (Buunk et al., 1993; Flynn, 2003). According to the equity principle of social exchange, exchange parties assess the magnitude of acquired and contributed resources and strive to maintain an equitable balance of their exchanges (Adams, 1965; Homans, 1961). During exchanges with leaders, members are especially attentive to exchange balance due to the hierarchical asymmetry of the LMX relationship (Duarte, Goodson, & Klich, 1994). They are acutely aware of the amount, direction, and quality of exchanged resources in particular episodes and mentally account for the overall magnitude of received and contributed resources (Henderson & Peterson, 1992). Nevertheless, leaders and members exchange resources with distinct essences due to their inherent difference in positions, status, and roles within the organization (Wilson et al., 2010), resulting in members' uncertainty about the magnitude of the discrepancies in values of received and contributed resources. Members thus may generally categorize the resource elements to which the gains and losses are attached and weigh the exchange balance heuristically (Henderson & Peterson, 1992; Kahneman & Tversky, 1984). They categorize leader contribution as resource gains and their own contribution as resource losses (Flynn, 2003). Episodic resource contribution surplus occurs when members perceive that the gains outweigh the losses in a transaction episode.

Episodic resource contribution surplus elicits momentary sense of obligation to reciprocate, an ephemeral prescriptive belief that benefits received from the exchange partner should be returned (Eisenberger et al., 2001). The equity and reciprocity principles of social exchange suggest normative and instrumental reasons for this relationship. The normative reason holds that members have to restore equity through repaying favors from leaders under a positive imbalance exchange condition (Emerson, 1976; Gouldner, 1960), because reciprocity is a culturally universal principle with mutually interlocking duties (Schwartz, 1977). Episodic resource contribution surplus evokes indebtedness and thus makes members feel distressed. The greater the surplus magnitude, the stronger will be the distress, enhancing members' momentary sense of obligation to reciprocate. Hence, positively imbalanced episodic exchanges with leaders will cause members to feel indebted and generate an immediate obligation to reciprocate.

Instrumental considerations for future self-gains may also drive the momentary sense of obligation to reciprocate (Eisenberger et al., 2001; Eisenberger, Cotterell, & Marvel, 1987). The interdependent nature of social exchange implies that both contributions and reciprocations are indispensable for the exchange relationship to continue (Bernerth et al., 2007; Liden et al., 1997). Member reciprocation is a function of leader extra resource contribution and leader contribution in future exchanges is also contingent on the content, degree, and timing of reciprocation provided by members. Such a bidirectional pattern indicates that members' reciprocation may enhance future gains from episodic transactions with leaders (Eisenberger et al., 1987, 2001). Thus, to ensure future gains, members will feel an instantaneous obligation to repay extra favors from leaders in response to positive imbalance conditions of episodic transactions.

Hypothesis 1: In an episodic transaction, episodic resource contribution surplus positively relates to member momentary sense of obligation to reciprocate.

Effects on State Work Engagement and Member Contribution in Episode *t* + 1

A sense of obligation to reciprocate propels exchange parties to behave in ways valued by the other in order to return the received extra favors (Cropanzano & Mitchell, 2005; Eisenberger et al., 2001). In the relationship with leaders, the major responsibility of members is to perform work roles and provide work contributions, both of which benefit leaders in their role of leading organizational success (Graen & Scandura, 1987; Wilson et al., 2010). We propose that when members feel obligated to reciprocate after an episodic transaction, they display high state work engagement immediately and provide more contributions in the next transaction episode.

State work engagement, an affective-motivational construct, captures a momentary experience of the simultaneous investment of physical, cognitive, and emotional resources in the full performance of work roles and tasks (Bakker, 2014; Schaufeli, Salanova, González-Romá, & Bakker, 2002). It is a fleeting and ephemeral work state that fluctuates as a function of the ebb and flow of work resources (Bledow, Schmitt, Frese, & Kühnel, 2011). Devoting a great amount of personal resources into their work role and task performances after episodic transactions is the most accessible and role-appropriate way for members to repay leaders' favors (Graen &

Scandura, 1987; Wilson et al., 2010), because doing so helps members fulfill job responsibilities and achieve great work outcomes. Prior research has documented work engagement as a strong prediction of job performance, customer loyalty, and organizational commitment (see Christian, Garza, & Slaughter, 2011 for a metaanalytical review). Such positive work outcomes facilitate leaders' personal success (Wilson et al., 2010). Therefore, in responding to momentary sense of obligation to reciprocate, members are instantaneously motivated to bring and harness themselves to the work role performances.

Additionally, momentary sense of obligation to reciprocate motivates members to contribute more resources in their next episodic transaction with leaders. To provide more contributions, members will endeavor to perform in-role activities effectively. For example, members feel obligated to reciprocate after receiving useful work guidance or meaningful tasks from leaders and thus they will present well-performed tasks in the next episode (Graen & Scandura, 1987). Moreover, members will engage in more extrarole behaviors to increase resource contributions in the next episode (Wilson et al., 2010). For example, members may volunteer for extra work responsibilities or provide additional help and support to leaders due to the perceived reciprocity obligation that arises from leaders' giving of extra personal support or job latitude in the current transaction. Taken together, these in- and extra-role behaviors give rise to members' resource contributions in the next episodic transaction.

Prior research has demonstrated that receiving extra job resources in a particular work event leads to high state work engagement (Bakker, 2014). Studies on social exchange have also showed that positively imbalanced episodic transactions cause receivers to contribute more resources, such as increased productivity and interpersonal help (Cropanzano & Mitchell, 2005; Flynn, 2003). Integrating these arguments, we propose that momentary sense of obligation to reciprocate mediates the indirect effects of episodic resource contribution surplus on state work engagement and member contribution in the next episode.

Hypothesis 2: Member momentary sense of obligation to reciprocate mediates the relationships of episodic resource contribution surplus with (a) state work engagement, and (b) member contribution in Episode *t* + 1.

Moderating Effects of LMX Relationship Quality

Although episodic resource contribution surplus triggers members' transient reciprocations via momentary sense of obligation to reciprocate, we suggest that the strengths of such relationships vary across employees due to their distinct qualities of exchange relationships with leaders. The LMX literature suggests that the LMX relationship not only results from cumulative evaluations of prior exchanges, but also provides a key premise for future exchanges by affecting the processing of exchange balance conditions and the functioning of reciprocity (Bauer & Green, 1996; Dulac et al., 2008; Uhl-Bien & Maslyn, 2003). High-quality LMX relationships highlight long-term exchanges that are trustful, open-ended, spontaneous, and mutually beneficial, whereas low-quality LMX relationships focus on economic exchanges in which parties are attentive and suspicious of each exchange and they act according to contractual and immediately balanced obligations (Graen & Uhl-Bien, 1995; Liden et al., 1997). Hence, the quality of LMX relationships may serve as a boundary condition for our theorized mediation model by affecting the likeli-

hood to experience momentary sense of obligation to reciprocate due to episodic resource contribution surplus.

We expect the LMX relationship to weaken the positive effect of episodic resource contribution surplus on momentary sense of obligation to reciprocate. Previous research has shown that given the distinct relationship qualities, exchange parties process the imbalance information in episodic transactions differently, shaping the intensity of feeling obligated to reciprocate in response to episodic exchange resource surplus (Eisenberger et al., 2001; Uhl-Bien & Maslyn, 2003). When leaders and members have low-quality LMX relationships, they lack mutual trust, focus on contract-based obligations, and endeavor to maintain balances across short-term episodic transactions (Cropanzano & Mitchell, 2005; Graen & Uhl-Bien, 1995). Members thus are more attentive to imbalance conditions of episodic transactions and their resulting internal feelings (Liden et al., 1997). When they perceive a contribution surplus in episodic transactions, they are more likely to feel indebted and perceive a stronger instantaneous need to repay their leaders. Consequently, they are more likely to feel a momentary sense of obligation to reciprocate.

By contrast, in high-quality LMX relationships, members tend to focus on long-term mutual benefits rather than transient exchange balances (Graen & Uhl-Bien, 1995; Liden et al., 1997). They emphasize exchange reciprocity over longer time spans and are less sensitive to their indebtedness due to episodic resource contribution surplus. They thus are less likely to perceive a need to reciprocate due to receiving extra favors in discrete exchange episodes (Uhl-Bien & Maslyn, 2003). As a result, they feel less obligated to reciprocate under episodic resource contribution surplus conditions. We thus posit the following moderation hypothesis:

Hypothesis 3: LMX relationship quality moderates the relationship between episodic resources contribution surplus and member momentary sense of obligation to reciprocate, such that the relationship is stronger when leaders and members have low rather than high LMX relationship quality.

Integrating theoretical arguments in H_2 and H_3, we further propose a moderated mediation model of leader-member episodic exchange:

Hypothesis 4: The positive indirect effects of episodic resource contribution surplus on (a) state work engagement, and (b) member contribution in Episode $t + 1$ via member momentary sense of obligation to reciprocate are stronger when leaders and members have low rather than high LMX relationship quality.

Method

Sample and Procedure

We collected data from 74 employees working for an information technology (IT) company in Northern China.[2] The IT company was an appropriate research site for our event-based study because employees interacted with their immediate leaders frequently during working hours, had easy access to wireless networks for the mobile survey system, and were accustomed to using mobile survey platforms. To capture within-dyad fluctuations of resource transactions, we used an event-contingent ESM, whereby participants submitted their momentary assessments through a mobile survey platform whenever they had meaningful face-to-face interactions with their direct leaders (Bolger et al., 2003; see further explanations below).

We first contacted the company's human resources department to explain our research purpose and ask for assistance in recruiting employees who would interact with their direct leaders frequently in the study period. Before commencing the data collection, we sent all participants an announcement assuring the voluntariness of participation and the confidentiality of responses. Of the 73 employees who completed usable surveys (a 98.6% response rate), 53.4% were women, 83.6% had college educations or above, their average age was 28.5 years old, their organization tenure averaged 11.9 months, and the average dyadic tenure with their direct leaders was 9.01 months ($SD = 4.96$).

The data collection comprised two parts. First, participants completed a paper-and-pencil survey for assessing LMX relationship quality and giving demographic information during the study briefing session. Second, in the following 2 weeks during work time (including extra working hours), if participants had face-to-face interactions that lasted more than 2 min with their direct leaders, they completed momentary surveys through mobile phones within 1 hr after the transaction episodes (Bolger et al., 2003; Liu, Song, Li, & Liao, 2017). The interaction excluded non-face-to-face communications such as phone calls, short messages, or emails. Participants assessed the amount of resources received from and contributed to leaders in the reported transaction episode, momentary sense of obligation to reciprocate, and state work engagement after the episodic transaction.

We collected data using the mobile survey technique (Liu et al., 2017), a mobile platform for electronic questionnaire administration that allows participants to submit responses at almost any time and place. Before the formal data collection, our research assistants met with participants to train them in using the mobile survey system. We also ran a trial session before the study to ensure that all participants could respond as needed. Participants were encouraged to contact researchers via email or telephone if they needed assistance. All responses were time stamped so we could record the specific time of responses. Each participant received 10 RMB (approximately $1.58 USD) for each pair of valid mobile survey responses.[3] No limit was set on the number of mobile survey responses.[4]

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[2] This study was conducted in accordance with the ethical guidelines for research involving human subjects by the National University of Singapore (A-16-007: Leader-Member Interaction Experiences).

[3] We provided incentives based on leader–member paired responses. Leaders and members received incentives only if they both submitted responses within 1 hr after the exchange.

[4] Participants initiated the completing of mobile surveys. To increase response rates, we sent all participants two SMS reminders each workday. We sent general reminders at 9:00 a.m. (the start of morning work) and 1:30 p.m. (the start of afternoon work). A sample message: "Good morning/afternoon. Please remember to answer the mobile survey after interacting with your leader. Thanks and have a good day!" In addition, because the data collection was part of a broader research project in which we simultaneously included responses from both employees and direct leaders, we sent conditional reminders when employees (leaders) submitted the survey after the transaction episode but leaders (employees) did not. Researchers monitored the system every 30 minutes from 8:30 a.m. to 9:30 p.m. during the data collection period. Conditional reminders were sent to the corresponding participants once the survey system indicated a leader or employee response. For example, "Please submit your response regarding the interaction you just had with your leader/subordinate."

Our final sample comprised 600 valid responses[5] from 73 participants (an average of 8.2 responses per person). Preliminary regression tests showed that LMX relationship quality did not significantly influence the frequency of exchange interactions. At the end of the study, participants completed a reflection survey estimating the total number of exchange interactions over the past 2 weeks. We divided the estimated numbers of exchange interactions by the numbers of valid momentary responses, yielding 55% of the total number of episodes captured.

Measures

All measures used in this study were translated from English into Mandarin Chinse and then back-translated, following standard translation back-translation procedures (Brislin, 1980) to ensure translation accuracy.

Episodic resource contribution surplus. We operationalized episodic resource contribution surplus by examining the incongruence between leader and member contributions using the polynomial regression approach (see the detailed introduction in the Analytical Strategy section; Edwards & Parry, 1993; Hu & Liden, 2013; Vogel, Rodell, & Lynch, 2016). The exchanges between leaders and members generally involve six categories of resources: tasks, information, latitude, support, attention, and influence (Graen & Scandura, 1987). Focusing on those six categories, we asked participants to rate how much they received from and gave to their leaders during the reported exchange episode (Graen & Scandura, 1987) on a scale ranging from 1 (*almost none*) to 5 (*quite a lot*). Sample items are "In the interaction you just had with your immediate leader, how much did you receive from him/her regarding assigned meaningful tasks?" (leader contribution) and "In the interaction you just had with your immediate leader, how much did you contribute to him/her regarding providing useful work information?" (member contribution).[6] Average coefficient alphas were .93 for the Leader Contribution scale, and .94 for the Member Contribution scale.

Momentary sense of obligation to reciprocate. We measured momentary sense of obligation to reciprocate with a two-item scale adapted from Eisenberger et al. (2001), which was relatively applicable in our momentary scenario. Participants indicated their levels of agreement on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "At this moment, I feel an obligation to do whatever I can do to help my leader achieve his/her goals." The average coefficient alpha for this scale was .87.

State work engagement. We measured state work engagement with a six-item scale by Bakker and Xanthopoulou (2009) adapted from the Utrecht Work Engagement Scale (Schaufeli et al., 2002). To make the items more applicable to our momentary scenario, we reworded them to focus on momentary work engagement (Lanaj, Johnson, & Barnes, 2014). Participants indicated their levels of agreement on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "At this moment, I am enthusiastic about my job." Consistent with previous work engagement research using an experience sampling approach, we combined all six items as an aggregated measure of state work engagement (Lanaj et al., 2014; Bledow et al., 2011). The average coefficient alpha of this scale was .95.

LMX relationship quality. LMX relationship quality was assessed with a seven-item scale developed by Graen and Uhl-Bien

(1995). Members assessed their relationship quality with leaders in the baseline survey. A sample item is "I have enough confidence in my leader that I would defend and justify his/her decision if he/she were not present to do so" (1 = *strongly disagree* to 5 = *strongly agree*). The coefficient alpha of this scale was .86.

Control variables. Perceived interaction quality may influence how members process episodic exchanges, which then affects their subsequent responses (Burgoon, 1993; Liu et al., 2017). Hence, we controlled for perceived interaction quality at the episode level to show that resource contributions are still associated with the proposed outcomes even when the interaction quality stayed the same. We assessed perceived interaction quality with three self-developed items, measured on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "The interaction I just had with my leader was effective." We also controlled for the demographic factors of age, gender, and leader—employee dyadic tenure. We conducted analyses without control variables, and found no differences in the magnitude, direction, or statistical significance of the results.

Confirmatory Factor Analysis

Following Dyer, Hanges, and Hall's (2005) procedures, we conducted a series of multilevel confirmatory factor analyses to examine the dimensionality of constructs at the episode level. A four-factor baseline model composed of leader contribution, member contribution, momentary sense of obligation to reciprocate, and state work engagement fit the data well ($\chi^2_{(328)} = 811.360$, $p < .01$, root-mean-square error of approximation (RMSEA) = .050, comparative fit index (CFI) = .94, Tucker-Lewis index (TLI) = .93, standardized root-mean-square residual [$SRMR_{(Within-dyad)}$] = .040, $SRMR_{(Between-dyad)}$ = .07), better than alternative models,[7] demonstrating the discriminant validity of episodic exchange measures.

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[5] Following previous studies that used similar momentary research designs (e.g., Liu et al., 2017), we dropped responses submitted more than 1 hr after each exchange to improve measurement accuracy.

[6] We also collected leader-reported member contribution and conducted all analyses using this measurement. Both sets of analyses yielded virtually identical results that did not affect study conclusions. Given our theorization regarding members' psychological processes and the comparable results from both leader- and member-reported resource contributions, we used member-reported resource contributions to report our findings.

[7] Alternative models included a three-factor model in which indicators of leader and member contributions were set to load on a single factor ($\Delta\chi^2_{(6)} = 2156.99$, $p < .01$, RMSEA = .12, CFI = .66, TLI = .61, $SRMR_{(Within-dyad)} = .18$, $SRMR_{(Between-dyad)} = .09$); a three-factor model in which indicators of momentary sense of obligation to reciprocate and state work engagement were set to load on a single factor ($\Delta\chi^2_{(6)} = 98.82$, $p < .01$, RMSEA = .06, CFI = .92, TLI = .91, $SRMR_{(Within-dyad)} = .05$, $SRMR_{(Between-dyad)} = .08$); a three-factor model in which indicators of leader contribution and momentary sense of obligation to reciprocate were set to load on a single factor ($\Delta\chi^2_{(6)} = 535.30$, $p < .01$, RMSEA = .08, CFI = .86, TLI = .85, $SRMR_{(Within-dyad)} = .09$, $SRMR_{(Between-dyad)} = .09$); a two-factor model in which indicators of leader and member contributions and indicators of momentary sense of obligation to reciprocate and state work engagement were set to load on a single factors, respectively ($\Delta\chi^2_{(10)} = 2246.35$, $p < .01$, RMSEA = .12, CFI = .65, TLI = .61, $SRMR_{(Within-dyad)} = .18$, $SRMR_{(Between-dyad)} = .09$); and a two-factor model in which indicators of leader and member contributions and momentary sense of obligation to reciprocate were set to load on a single factor ($\Delta\chi^2_{(10)} = 2773.014$, $p < .01$, RMSEA = .13, CFI = .58, TLI = .53, $SRMR_{(Within-dyad)} = .20$, $SRMR_{(Between-dyad)} = .11$).

Analytical Strategy

Given the multilevel structure of our data set and the focus on the effects of episodic resource contribution surplus (i.e., the incongruence between leader and member contributions), we integrated procedures for polynomial regression (Edwards & Cable, 2009) and moderated mediation (Edwards & Lambert, 2007) to conduct two-level path analyses within the framework of multilevel structural equation modeling (MSEM; Preacher, Zyphur, & Zhang, 2010) using Mplus 7.0 (Muthén & Muthén, 1998–2014). The Appendix presents a complete description of equations and computations for testing the hypothesized effects of episodic resource contribution surplus. We group-mean-centered variables at the episode level and grand-mean-centered LMX relationship quality at the employee level to reduce potential multicollinearity (Enders & Tofighi, 2007). The three second-order polynomial terms were calculated with group-mean-centered leader and member contributions. Following Edwards and Parry's (1993) recommendations, we used the multilevel regression coefficients to plot corresponding response surfaces in which leader contribution and member contribution were plotted on the perpendicular horizontal axes, and mediating or outcome variables were plotted on the vertical axis. To assess the amount of variance in mediating and outcome variables accounted for by the study constructs, we computed the values of pseudo-R^2 and their changes as estimates of effect sizes (Hofmann, Griffin, & Gavin, 2000).

To test within-dyad direct effects of episodic resource contribution surplus (H_1), we estimated MSEM models with five polynomial terms using random slopes (Model 1). In support of the hypothesized effects of episodic resource contribution surplus, the slope of the incongruence line (where LC = $-$MC, calculated as $\gamma_{10} - \gamma_{20}$) must be positive and significant, suggesting that dependent variables increase along the incongruence line from low leader contribution and high member contribution to high leader contribution and low member contribution (Edwards & Parry, 1993). We used the block variable approach (Edwards & Cable, 2009; Matta, Scott, Koopman, & Conlon, 2015) to examine the indirect effects of episodic resource contribution surplus on state work engagement and member contribution in Episode $t + 1$ via momentary sense of obligation to reciprocate (H_{2a} and H_{2b}). Specifically, we first created a block variable by multiplying the estimated multilevel regression coefficients of five polynomial terms (from Model 1) with the corresponding raw data to attain a weighted linear composite. We then estimated MSEM models with the block variable, the mediator, and outcome variables using random slopes to examine the mediation effects. We further tested the mediation effects with a Monte Carlo simulation with 20,000 replications using the online software R (Preacher et al., 2010).

To test the cross-level moderating effect of LMX relationship quality (H_3), we estimated an MSEM model (Model 2) that included LMX relationship quality (Level 2) as a predictor of within-dyad random slopes of five polynomial terms with momentary sense of obligation to reciprocate (Vogel et al., 2016). The estimate of the multilevel interaction between episodic resource contribution surplus and LMX relationship quality was obtained from the difference score in coefficients of interactions between the two first-order polynomial terms and LMX relationship quality ($\gamma_{11} - \gamma_{21}$, Model 2; Hu & Liden, 2013). We also examined the moderating effect by testing the slopes of the incongruence line in high and low conditions of LMX relationship quality and by estimating pseudo-R^2 change to test the effect size of the interaction (Edwards & Cable, 2009). We then estimated MSEM models (Models 5 or 8) to examine the moderated mediation effects in H_{4a} and H_{4b}.

Results

Descriptive Statistics, Within-Dyad Variance, and Correlations

Table 1 presents the means, standard deviations, percentages of within-dyad variance, and variable correlations among study variables. We examined the amount of variance in episodic transaction variables accounted for by episodes. Results revealed that 72.84%, 74.37%, 74.42%, and 70.17% of the variance in leader contribution, member contribution, momentary sense of obligation to reciprocate, and state work engagement, respectively, existed within employees. These results suggest that leader and member resource contributions varied substantially across transaction episodes and that members saliently differed in their momentary exchange responses, demonstrating that exchanges between leaders and members indeed presented significant micro-within-dyad dynamics.

Tests of Hypotheses

Table 2 reports the parameter estimates of multilevel polynomial regression analysis for testing the effects of episodic resource contribution surplus on mediating and outcome variables. Table 3 presents the results testing response surfaces regarding the direct effects of episodic resource contribution surplus on mediating and outcome variables. H_1 posited that episodic resource contribution surplus positively relates to momentary sense of obligation to reciprocate. Results from Model 1 (Tables 2 and 3) showed that the slope of the incongruence line was positive and significant ($\gamma_{10} - \gamma_{20} = .22$, $p < .05$, 95% CI [.01, .43]). We plotted the corresponding surface response in Figure 2A, which showed that momentary sense of obligation to reciprocate increases as it moves along the incongruence line from low leader contribution and high member contribution to high leader contribution and low member contribution. These results provide support for H_1.

H_2 predicted that momentary sense of obligation to reciprocate mediates the effect of episodic resource contribution surplus with state work engagement (H_{2a}) and member contribution in Episode $t + 1$ (H_{2b}). We first examined the direct effect of episodic resource contribution surplus on two outcome variables. Results from Models 3 and 6 (Tables 2 and 3) showed that both slopes of the incongruence line were positive and significant ($\gamma_{10} - \gamma_{20} = .31$, $p < .01$, 95% CI [.15, .48] for state work engagement; $\gamma_{10} - \gamma_{20} = .53$, $p < .01$, 95% CI [.22, .83] for member contribution in Episode $t + 1$). Figure 2B and 2C present the corresponding response surfaces for state work engagement and member contribution in Episode $t + 1$, respectively. The mediation effect test using the block variable approach revealed that the indirect effects of episodic resource contribution surplus on state work engagement and member contribution in Episode $t + 1$ via momentary sense of obligation to reciprocate were significant ($ab_1 = .77$, $p < .01$, 95% CI [.44, 1.09] for state work engagement;

Table 1

Means, Standard Deviations, Percentages of Within-Dyad Variance, and Correlations Among Study Variables

Variables	M	SD	Within-dyad variance/percentage	Correlations									
				1	2	3	4	5	6	7	8	9	10
1. Age	29.12	5.24											
2. Gender	1.53	.50		−.15									
3. Leader-member dyadic tenure (month)	9.02	4.96		.08	−.04								
4. LMX relationship quality	3.72	.66		−.03	−.08	.25*	*.86*						
5. Interactional quality	3.38	1.00		.09	−.06	.15	.06	*.91*	.18**	.14**	.25**	.21**	.06
6. Leader contribution in Episode t	3.64	.97	.67**/72.84	−.02	−.02	.27*	.19	.28*	*.93*	−.17**	.58**	.57**	.38**
7. Member contribution in Episode t	3.50	1.00	.71**/74.37	−.16	.13	.30**	.06	.27*	.68**	*.94*	−.10*	−.12**	−.28**
8. Momentary sense of obligation to reciprocate	3.88	.75	.42**/74.42	−.06	.01	.10	.18	.08	.58**	.47**	*.87*	.79**	.37**
9. State work engagement	3.79	.73	.37**/70.17	−.15	.02	.09	.22	.03	.56**	.48**	.81**	*.95*	.34**
10. Member contribution in Episode $t + 1$	3.60	.96		−.08	.10	.02	−.17	.06	.34**	.75**	.24*	.19	

Note. $N = 600$ at the episode level; $N = 73$ at the employee level. Numbers in the lower diagonal are correlations at the employee level. Numbers in the upper diagonal are correlations at the episode level. Coefficient alpha estimates of reliability are reported on the diagonal in bold and italic. The component percentage of within-dyad variance was computed as within-dyad variance/(within-dyad variance + between-dyad variance). Gender was coded as follows: 1 = man, 2 = woman. LMX = leader-member exchange.
* $p < .05$ (two tailed).   ** $p < .01$ (two tailed).

$ab_2 = .33$, $p < .01$, 95% CI [.02, .64] for member contribution in Episode $t + 1$), supporting H_{2a}[8] and H_{2b}.

To test the cross-level interaction of the incongruence between leader and member contributions with LMX relationship quality (H_3), we first included the moderator into the multilevel polynomial regression model (Model 2, Table 2). The change in pseudo-R^2 value of the interaction model indicated that 2% of the total variance in momentary sense of obligation to reciprocate was attributed to the inclusion of the moderating effect. Table 4 presents results testing the interacting effect and response surfaces about the effects of episodic resource contribution surplus on momentary sense of obligation to reciprocate at two conditional values of the moderator (i.e., 1 *SD* above and below the mean; Cohen, Cohen, West, & Aiken, 2003). The cross-level interaction between episodic resource contribution surplus and LMX relationship quality negatively related to momentary sense of obligation to reciprocate ($\gamma_{11} - \gamma_{21} = -.31$, $p < .01$, 95% CI [−.45, −.17]). The slope of the incongruence line was positive and significant only when LMX relationship quality was low (estimate = .43, $p < .01$, 95% CI [.23, .63]) versus high (estimate = .02, *ns*, 95% CI [−.22, .25]), suggesting that momentary sense of obligation to reciprocate increases along the incongruence line from low leader contribution and high member contribution to high leader contribution and low member contribution only for members who had low- rather than high-quality LMX relationships with their leaders. To examine the nature of the moderating effect, we plotted the response surfaces at two conditional values of LMX relationship quality. As Figure 3 shows, the surface was flatter along the incongruence line in the high- rather than low-quality LMX relationship condition. The results provide support for H_3.

To test the first-stage moderated mediation effects suggested by H_4, we first estimated the effects of momentary sense of obligation to reciprocate on outcomes with controlling for the effects of five polynomial terms, the moderator, and interaction terms (Models 5 or 8, Table 2). Results showed that momentary sense of obligation to reciprocate was positively related to state work engagement ($\gamma_{60} = .44$, $p < .01$; Model 5) and member contribution in Episode $t + 1$ ($\gamma_{60} = .20$, $p < .05$; Model 8). We further estimated the indirect effects of episodic contribution surplus on outcome variables via momentary sense of obligation to reciprocate with a first-stage moderation of LMX relationship quality using the block variable approach. Results revealed that the indirect effect on state work engagement was stronger under the low-quality LMX relationship condition ($a_1b = .53$, $p < .01$, 95% CI [.31, .74]) versus that under the high-quality LMX relationship condition ($a_2b = .21$, $p < .05$, 95% CI [.05, .37]). The difference between these two conditional indirect effects was significant (estimate = −.32, $p < .05$, 95% CI [−.62, −.02]), supporting H_{4a}. Likewise, the indirect effect on member contribution in Episode $t + 1$ was stronger under the low-quality LMX relationship condition ($c_1b = .20$, $p < .01$, 95% CI [.11, .16]) than that under the high-quality LMX relationship condition ($c_2b = .08$, *ns*, 95% CI [−.00, .16]). The estimate of the difference between these two conditional indirect effects was −.12 ($p < .10$, 95% CI [−.27, .02], 90% CI [−.24, −.00]). We acknowledge that 95% CI of the difference included 0. Nevertheless, according to Preacher et al. (2010) and studies with similar analytical approaches (e.g., Vogel et al., 2016), it is justi-

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[8] Given that momentary obligation to reciprocate and state work engagement were measured at the same time point, we additionally examined whether our hypothesized mediation pattern or the other potential mediation pattern fit the data better. We followed Kline's (2011) recommendation to compare the value of Akaike's information criterion (AIC), Bayesian information criterion (BIC), and sample-size adjusted BIC among different models. According to Kline, the model with the smallest AIC, BIC, and adjusted BIC value fits the data best and has the highest possibility for replication. The fit indices for our hypothesized model (i.e., Episodic contribution surplus (ECS) → Momentary obligation to reciprocate (SOR) → State work engagement (WEG), AIC = 342.946, BIC = 426.488, sample-size adjusted BIC = 366.168) were better than the alternative mediation model (i.e., ECS → WEG → SOR AIC = 399.323, BIC = 482.856, sample-size adjusted BIC = 422.545). Thus, compared with the other mediation pattern, the hypothesized mediation pattern fit the data better and was more likely to be replicated.

Table 2

Unstandardized Coefficients of MSEMs for Testing Hypothesized Main, Mediation, and Moderation Effects

| | Momentary sense of obligation to reciprocate | | | | State work engagement | | | | | | Member contribution in Episode $t + 1$ | | | | | |
| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | | Model 7 | | Model 8 | |
Variables	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE	Est.	SE
Variables at the episode level																
Interaction quality	.02	.01	.02	.04	.01	.01	.00	.01	.00	.01	−.02	.03	−.03	.03	−.02	.02
Leader contribution (LC), γ_{10}	.26**	.07	.25**	.09	.30**	.05	.17**	.04	.17**	.04	.26*	.11	.20†	.08	.18	.10
Member contribution (MC), γ_{20}	.04	.06	.03	.06	−.01	.06	−.00	.04	−.01	.04	−.27**	.09	−.26**	.08	−.26**	.09
LC^2, γ_{30}	−.00	.04	−.02	.05	−.02	.04	−.01	.02	−.02	.03	.04	.06	.03	.06	.03	.06
LC × MC, γ_{40}	.03	.03	.03	.08	.03	.02	.00	.02	.02	.01	.05	.05	.05	.04	.05	.04
MC^2, γ_{50}	−.03	.03	−.02	.04	−.01	.03	.00	.03	.01	.02	−.01	.06	.00	.06	.01	.06
Momentary sense of obligation to reciprocate, γ_{60}							.46**	.06	.44**	.05			.22*	.10	.20*	.10
Variables at the subordinate level																
LMX relationship quality (LMX), γ_{01}			.03	.04					.02	.02					.08	.07
Cross-level interactions																
LC × LMX, γ_{11}			−.03	.07					−.03	.04					−.03	.11
MC × LMX, γ_{21}			.28**	.07					.14**	.04					−.07	.13
LC^2 × LMX, γ_{31}			.03	.06					.02	.03					−.03	.11
LC × MC × LMX, γ_{41}			.02	.09					.01	.01					.05	.06
MC^2 × LMX, γ_{51}			−.05	.15					−.03	.02					−.01	.08
Pseudo-R^2	.54		.56		.75		.79		.79		.45		.48		.49	
ΔPseudo-R^2			.02				.04		.00				.04		.01	

Note. $N = 600$ at the episode level; $N = 73$ at the employee level. We also controlled for demographics of age, gender, and leader-member dyadic tenure at the between-dyad level in all analyses. The coefficients for demographic effects were insignificant ($ps > .30$). We omitted estimates of between-dyad control variables for brevity. MSEM = multilevel structural equation modeling; LMX = leader-member exchange; Est. = coefficient estimate; SE = standard error.

† $p < .10$. * $p < .05$ (two tailed). ** $p < .01$ (two tailed).

fiable to use 90% CI to test within-dyad conditional indirect effects. Therefore, although these results did not provide full support for H_{4b}, they were generally consistent with this hypothesis.[9]

Discussion

Drawing from research on equity and reciprocity principles in social exchange, we developed and tested an episodic resource transaction model delineating how episodic resource contribution surplus influences state work engagement and member contribution in Episode $t + 1$ through momentary sense of obligation to reciprocate, depending on the quality of LMX relationships. Our research has important theoretical and practical implications.

Theoretical Implications

The exchanges between leaders and members comprise inextricably interconnected episodes of resource transactions (Cropanzano & Mitchell, 2005; Emerson, 1976), in which leaders and members experience considerable short-term within-dyad exchange dynamics (Bauer & Erdogan, 2015; Liao et al., 2015). The vast majority of LMX studies, however, has focused on the general relationship of leader-member dyads, implicitly assuming that leaders and members tend to have stable resource exchanges across episodic interactions. By studying a sequence of episodic resource transactions over 2 weeks, our research moves beyond this assumption and empirically demonstrates that leader-member dyads vary substantially in resource giving and taking from mo-

ment to moment. Such variations reveal the microexchange dynamics in leader-member dyads. Building upon this evidence, our research initiates a more penetrating conversation on understanding the exchanges between leaders and members.

We offer new insight into how leaders and members perform discrete exchanges by showing episodic contribution surplus as a trigger of member subsequent reciprocations. Our findings suggest that unilaterally considering leader contribution may not be adequate in predicting members' reciprocal responses in episodic transactions, because members repay leaders only when what they have received is more than what they have

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[9] We conducted supplementary analyses to test whether LMX relationship quality moderates the relationships of momentary sense of obligation to reciprocate with outcome variables (see Model 9 in the Appendix). Results showed that LMX relationship quality was negatively related to the within-dyad random slope of momentary sense of obligation to reciprocate with member contribution in Episode $t + 1$ ($\gamma_{61} = -.35$, $p < .05$) but not related to that with state work engagement ($\gamma_{61} = .10$, *ns*), suggesting that LMX relationship quality moderates only the relationship of momentary sense of obligation to reciprocate with member contribution in Episode $t + 1$, but not that with state work engagement (Preacher et al., 2010). Results testing conditional indirect effects revealed that the indirect effect of episodic contribution surplus on member contribution in Episode $t + 1$ via momentary sense of obligation to reciprocate was stronger in the low-quality LMX relationship condition ($a_1 b_1 = .47$, $p < .01$, 95% CI [.17, .78]) versus that in the high-quality LMX relationship condition ($a_2 b_2 = .018$, *ns*, 95% CI [−.08, .11]). The difference between two conditional indirect effects was significant (estimate = −.45, $p < .10$, 95% CI [−.73, −.18]), supporting the dual-stage moderating role of LMX relationship quality in the mediation link of member contribution in Episode $t + 1$.

Table 3
Results From Response Surface Tests of Mediating and Outcome Variables

Response surface	Momentary sense of obligation to reciprocate (Model 1)			State work engagement (Model 3)			Member contribution in Episode $t + 1$ (Model 6)		
	Est.	SE	95% CI	Est.	SE	95% CI	Est.	SE	95% CI
Congruence line (LC = MC)									
Slope: $\gamma_{10} + \gamma_{20}$	.30**	.08	[.14, .45]	.29**	.06	[.17, .40]	−.01	.11	[−.23, .22]
Curvature: $\gamma_{30} + \gamma_{40} + \gamma_{50}$	−.00	.05	[−.10, .09]	.01	.03	[−.06, .07]	.07	.09	[−.10, .25]
Incongruence line (LC = −MC)									
Slope: $\gamma_{10} - \gamma_{20}$	.22*	.11	[.01, .43]	.31**	.09	[.15, .48]	.53**	.16	[.22, .83]
Curvature: $\gamma_{30} - \gamma_{40} + \gamma_{50}$	−.06**	.02	[−.10, −.02]	−.05**	.02	[−.08, −.02]	−.02	.03	[−.08, .04]

Note. $N = 600$ at the episode level; $N = 73$ at the employee level. LC = leader contribution; MC = member contribution; Est. = coefficient estimate; SE = standard error; CI = confidence interval.
* $p < .05$ (two tailed). ** $p < .01$ (two tailed).

given in an episodic transaction (Cropanzano & Mitchell, 2005; Flynn, 2003). Research with a conventional between-person retrospective design is unlikely to present such unique findings, since the overall exchanges captured by this approach tends to be balanced—members who receive more from leaders are always those who generally contribute more, and they consistently have a strong reciprocal obligation (Dulebohn et al., 2012). The contrasting correlations among study variables observed at different levels implicitly support the unique value of studying micro exchange dynamics. Although member contribution was negatively correlated with leader contribution, momentary sense of obligation to reciprocate, and state work engagement at the episode level ($\gamma = -.17, -.10$, and $-.12$, respectively, $ps < .05$), it was positively correlated with these variables at the employee level ($r = .68, .47$, and $.48$, respectively, $ps < .01$). The disparities indicate that within one transaction episode, high resource giving is not always connected with high resource taking and obligation to reciprocate. Taken together, our research provides a more granular perspective on how leaders and members exchange resources on a momentary basis.

More importantly, our research enhances the richness of LMX research by exploring the moderating role of LMX relationship in episodic resource transactions. While connecting transactions and relationships might seem straightforward given the well-documented evidence that mutually reciprocal exchanges over time enhance the building of high-quality relationships (Bauer & Green, 1996; Liden et al., 1993), our research establishes a complementary framework, suggesting that the LMX relationship provides a relational premise for members to process episodic transactions. We found that the LMX relationship attenuates the effects of positively imbalanced resource transactions by weakening the relationship between resource contribution surplus and momentary sense of obligation to reciprocate. This finding directly speaks to the question that how relationships recast the patterns of discrete exchanges—by affecting the way in which members see their urgency for returning favors. Compared with those with low-quality LMX relationships, members with high-quality LMX relationships tend to feel that those positive imbalanced transactions are common ingredients of the relationships with leaders, on which they are not compelled to react instantaneously. As a result, they are less likely to reciprocate episodically (Dulac et al., 2008; Uhl-Bien & Maslyn, 2003). Our results thus refine our understanding on how relationship interplays with episodic resource transactions.

Our findings on state work engagement and member contribution in Episode $t + 1$ as outcomes also shed light on the temporal nature of the effects of episodic transactions, taking a vital step forward on incorporating time into social exchange theory advancement (George & Jones, 2000; Mitchell & James, 2001). We found that resource transactions in an episode not only have an immediate effect on members by shaping their momentary engagement after this episode but they can also carry over to the following transaction episode by influencing members' resource contribution. Interestingly, such carry-over effects are only confined within the next episodic transaction: we did not find any exchange effects in Episode t spilling over to state work engagement after Episode $t + 1$ or member contribution in Episode $t + 2$.[10] We speculate that after contributing more resources in the following episode, members might feel that they have achieved transient balance in the exchanges with leaders and thus are not obligated to reciprocate after the transaction in Episode $t + 1$ (Blau, 1964). As such, compared with between-dyad studies that have shown long-standing consequences of general LMX relationships, our research offers a more accurate representation of the temporal element in the effects of leader-member episodic transactions.

By studying two different forms of reciprocity that members perform, our research also provides insight into how members return favors from leaders in episodic exchanges. Given their work relationship with leaders (Liden et al., 1997), in addition to directly contributing concrete resources in the next transaction, members return favors thoroughly but indirectly by investing greater personal resources in role and task performances. Doing so is a vicarious but inclusive way of repaying leaders because it helps members achieve better work outcomes such as higher performance (Christian et al., 2011), ultimately benefiting leaders' success (Wilson et al., 2010).

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[10] Results of supplementary time-lagged analyses showed that resource contribution surplus in Episode t had insignificant effects on state work engagement after Episode $t + 1$ (the slope of incongruence line $\gamma_{10} - \gamma_{20} = -.18$, *ns*, 95% CI [−.93, .53]) and member contribution in Episode $t +2$ (the slope of incongruence line $\gamma_{10} - \gamma_{20} = -.24$, *ns*, 95% CI [−.60, .12]). Additionally, momentary sense of obligation to reciprocate in Episode t was not related to state work engagement after Episode $t + 1$ ($\gamma = -.06$, *ns*) and member contribution in Episode $t + 2$ ($\gamma = -.02$, *ns*).
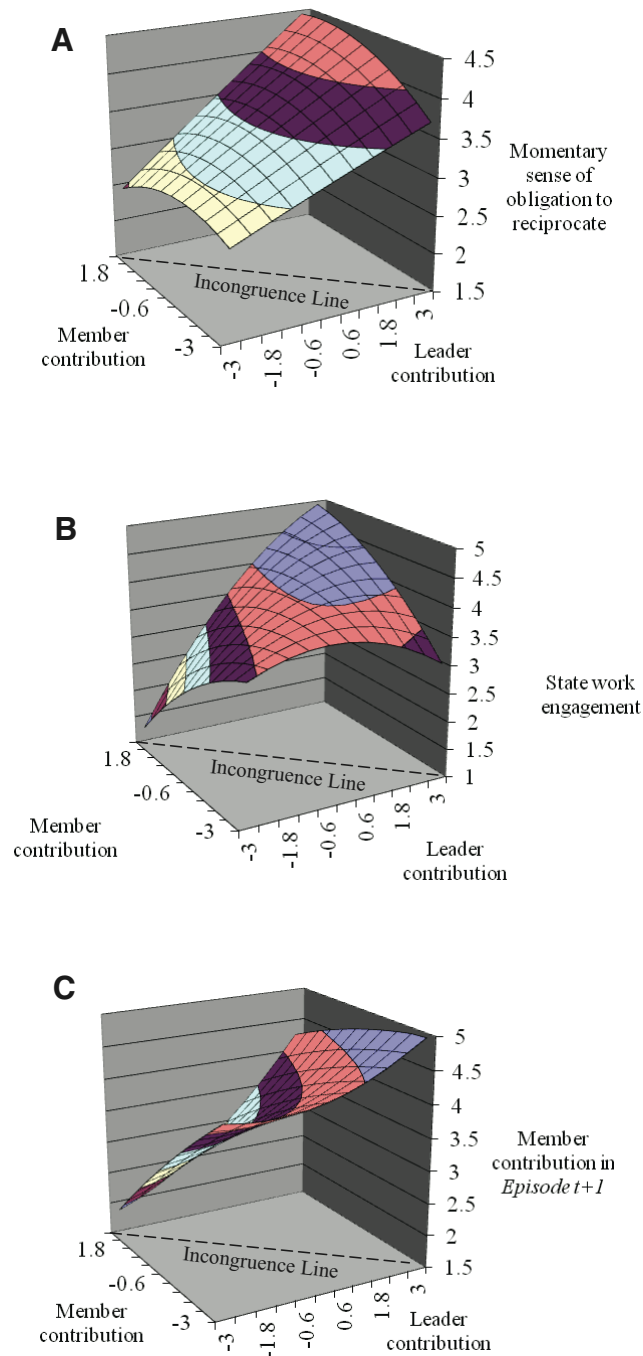
Figure 2. Effect of resource contribution surplus on mediating and outcome variables. (A) Momentary sense of obligation to reciprocate. (B) State work engagement. (C) Member contribution in Episode $t + 1$. See the online article for the color version of this figure.

Our research also extends and complements the literature on work engagement by studying how work-related events affect the momentary fluctuations of work engagement from a social exchange perspective. Past research on antecedents of work engagement has predominantly focused on energy replenishment or depletion that derives from resource-based regulatory frameworks such as the job demand-resources model (Bakker & Demerouti, 2007), ego depletion theory (Baumeister et al., 1998), or the conservation of resource theory (Hobfoll, 2001) to explore how the availability of personal resources, as an endogenous factor, drives employees to engage in their task and role performances (e.g., Lanaj et al., 2014; Tims, Bakker, & Xanthopoulou, 2011; Uy, Lin, & Ilies, 2017). Departing from previous research, we examined members' momentary prescriptive reciprocation belief that is endogenously determined by the equity and reciprocity rules of social exchange as a proximal predictor of state work engagement. This suggests a complementary theoretical articulation for why employees fluctuate their levels of engagement at work from moment to moment—in addition to personal energy, a sense of obligation due to taking extra resources in episodic transactions motivates members to better perform their tasks and roles. Therefore, our research offers an important response to the call for empirical studies on exploring work-related events to under more proximal predictors of momentary work engagement (Bakker, 2014; Sonnentag et al., 2010).

Finally, our research highlights the need to take a dynamic process approach to studying how leaders exert influences on employees across momentary interactions (Dinh & Lord, 2012; Yammarino, 2013). Leadership involves iterative interactions between leaders and followers in which leaders may behave flexibly to adjust to changing task and contextual demands. By investigating episodic transactions, our study sheds light on within-person fluctuations of leadership behaviors and suggests that a sound understanding of leadership warrants a more dynamic and process-focused perspective (Liao, Yam, Johnson, Liu, & Song, 2018). Moreover, by using a momentary reflection approach, we reduce contaminations from leadership perception biases (Martell & Evans, 2005) and thus enhance the accuracy of measuring psychological experiences derived from episodic transactions.

Practical Implications

Our study yields important practical implications for managers. The observed microexchange dynamics within leader-member dyads suggest that in addition to developing certain types of exchange relationships over time, managers and employees may transact resources with fluctuating weight and values across episodes. The overall relationship quality and the contributed resources from both parties in a particular transaction may collectively affect the quality of that episodic transaction (Cropanzano & Mitchell, 2005). Moreover, our finding on the effects of episodic contribution surplus suggests that beyond considering whether managers have contributed valuable resources or not, employees might also attend to the contribution ratio in discrete transactions, which would shape their subsequent reciprocal responses. Therefore, organizations should implement training programs that help managers develop a dynamic mindset about their exchanges with employees. In other words, managers should not only be limited at developing high-quality relationships with employees, but also should endeavor to maintain high-quality episodic transactions by providing them with beneficial resources from time to time, such as granting them appropriate work latitude across different

Table 4
Results From Tests of Stage 1 Moderation Effect and Response Surface of Mediator at High and Low Levels of LMX Relationship Quality

	Momentary sense of obligation to reciprocate		
Response surface and effects	Estimates	SE	95% CI
Interaction effect			
Resource contribution surplus $\times$ LMX: $\gamma_{11} - \gamma_{21}$	$-.31^{**}$	.07	$[-.45, -.17]$
Congruence line (LC = MC)			
High LMX			
Slope: $(\gamma_{10} + \gamma_{20}) + (\gamma_{11} + \gamma_{21}) \times$ LMX_h	$.45^{**}$	.10	$[.25, .65]$
Curvature: $(\gamma_{30} + \gamma_{40} + \gamma_{50}) + (\gamma_{31} + \gamma_{41} + \gamma_{51}) \times$ LMX_h	.00	.07	$[-.14, .14]$
Low LMX			
Slope: $(\gamma_{10} + \gamma_{20}) + (\gamma_{11} + \gamma_{21}) \times$ LMX_l	.11	.15	$[-.19, .42]$
Curvature: $(\gamma_{30} + \gamma_{40} + \gamma_{50}) + (\gamma_{31} + \gamma_{41} + \gamma51) \times$ LMX_l	$-.00$	.22	$[-.43, .42]$
Incongruence line (LC = $-$MC)			
High LMX			
Slope: $(\gamma_{10} - \gamma_{20}) + (\gamma_{11} - \gamma_{21}) \times$ LMX_h	.02	.12	$[-.22, .25]$
Curvature: $(\gamma_{30} - \gamma_{40} + \gamma_{50}) + (\gamma_{31} - \gamma_{41} + \gamma_{51}) \times$ LMX_h	$-.09$	.11	$[-.30, .12]$
Low LMX			
Slope: $(\gamma_{10} - \gamma_{20}) + (\gamma_{11} - \gamma_{21}) \times$ LMX_l	$.43^{**}$	.10	$[.23, .63]$
Curvature: $(\gamma_{30} - \gamma_{40} + \gamma_{50}) + (\gamma_{31} - \gamma_{41} + \gamma_{51}) \times$ LMX_l	$-.05$	.08	$[-.21, .12]$

Note. $N = 600$ at the episode level; $N = 73$ at the employee level. LMX = leader-member exchange; LC = leader contribution; MC = member contribution; SE = standard error; CI = confidence interval.
$^{**} p < .01$ (two tailed).

tasks or looking out for their welfare in the rapidly changing work context.

Our finding on the moderating role of LMX relationship quality suggests that high-quality LMX relationships may become a "trap" but low-quality LMX relationships may have a "merit" in terms of evoking immediate reciprocations from members (Uhl-Bien & Maslyn, 2003). High-quality LMX relationships might hinder immediate repay from members because employees under such relationships are less likely to feel obligated to reciprocate or to take actions instantaneously after receiving extra resources from managers. Employees under low-quality LMX relationships, conversely, may reciprocate managers' favors more quickly by immediately completing assigned tasks and proactively offering extra help. Thus, leadership training programs should focus on improving managers' interpersonal interaction skills and helping managers differentiate their exchange interactions with employees under different relationship conditions. Managers should also learn to manage expectations toward employees' reciprocation more appropriately and thus reduce the cost caused by unexpected deviance in employees' favor return. For example, when dealing with urgent tasks or missions, managers should use distinct strategies to manage employees according to different LMX relationships. Specifically, when interacting with employees under high-quality relationships, managers should explicitly stress the need for immediate and effective reciprocation. When interacting with employees under low-quality relationships, managers should offer them sufficient work resources that will instantaneously motivate them to explore their individual potential and, in turn, benefit managers themselves.

Limitations and Future Research

Our study has some limitations that should be addressed in future research. First, our study covered only two consecutive

weeks of sampled participants, raising a potential concern about generalization to leader-member dyads at different relationship development stages or over longer periods. Nevertheless, LMX research suggests that what matters in shaping episodic exchange patterns is the quality rather than the development stage of LMX relationship. The values of the mean and standard deviation of the LMX relationship in our study are identical with other LMX studies (Dulebohn et al., 2012), suggesting that our approach may not affect our generalizability. Additionally, we conducted analyses testing the moderating role of dyadic tenure, an indicator of the relationship development stage. Results showed that dyad tenure failed to moderate the effect of episodic contribution surplus on momentary sense of obligation to reciprocate ($\gamma_{11} - \gamma_{21} = -.04$, *ns*) or the effects of momentary sense of obligation to reciprocate on transient reciprocations ($\gamma_{61} = -.01$ and $-.04$, *ns*, for state work engagement and member contribution in Episode $t + 1$, respectively). That said, we believe it is meaningful and interesting for future research to track participants for a longer period.

Second, although we measured different types of exchanged resources, we investigated the overall effects using the average score rather than examining separate effects. However, resource theory suggests that exchanged resources have distinct natures and may elicit divergent reciprocal responses (Graen & Scandura, 1987). For example, members who are granted latitude may arrange their tasks more flexibly and focus more on performing tasks well over time rather than reciprocating immediately (Liden et al., 1997). Members are also more likely to directly help leaders after receiving interpersonal support rather than task information (Dulebohn et al., 2012). Therefore, we invite future research to investigate how specific exchanged resources evoke different types of reciprocations.

Third, our theory on the moderating effects of the LMX relationship suggests that although the LMX relationship has negative moderating effects for members' episodic reciprocal responses, it
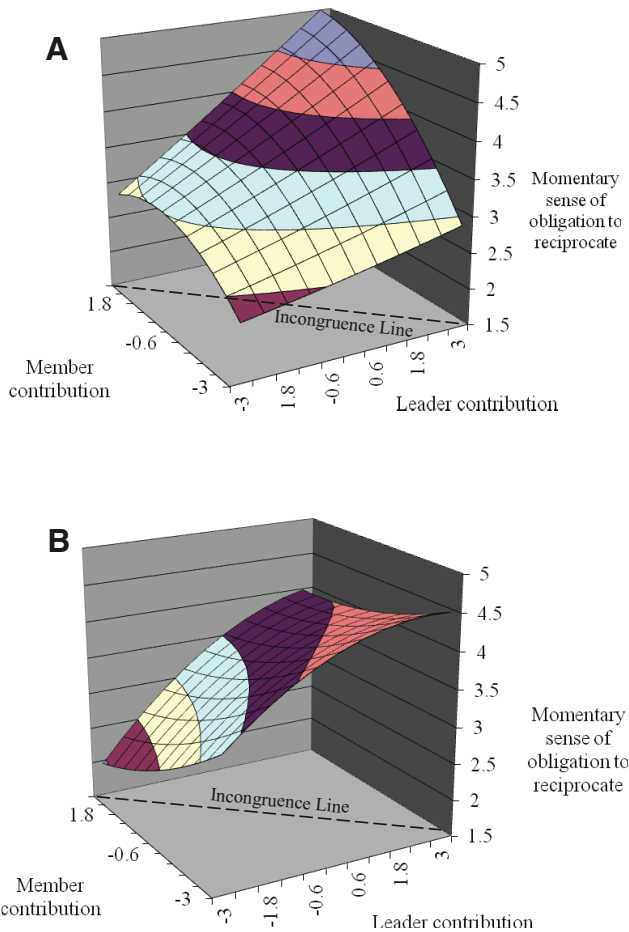
Figure 3. Effect of resource contribution surplus on momentary sense of obligation to reciprocate at high and low levels of leader-member exchange (LMX) relationship quality. (A) High LMX relationship quality. (B) Low LMX relationship quality. See the online article for the color version of this figure.

should be positively related to leader contribution, member contribution, felt obligation to reciprocate, and work engagement at the between-dyad level. Nevertheless, results of between-dyad tests showed that the LMX relationship only had positive but not significant relationships with these variables. We conjecture that these insignificant results may be due to the relatively small sample size at the between-person level and comparatively few episodic responses from some employees. We thus encourage future research to explore the role of the LMX relationship in episodic resource transactions with a bigger sample size and by gathering more episodic exchange responses from all participants.

Fourth, we collected data from a Chinese company, which may limit generalization to Western firms. Social exchange knowledge was developed in Western culture where LMXs are more salient than in Eastern societies (Rockstuhl, Dulebohn, Ang, & Shore, 2012). Cross-cultural variations may occur regarding responses to episodic exchanges. In high power distance contexts, for example, followers may respond more positively to received favors. Thus, future research may examine whether our findings generalize to Western samples.

Fifth, employees reported the independent variables, mediators, and one outcome variable simultaneously after each exchange episode, preventing us from drawing conclusions about relational causalities.[11] However, results from our additional analyses suggested that our hypothesized mediation pattern fit the data better than another mediation pattern (see Footnote 7). Nevertheless, item context effects may still challenge our conclusions (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We invite future research to test the causality of within-dyad relationships by conducting experimental experience sampling studies to manipulate the balance conditions of resource transaction across episodes.

Future research should consider other underlying mechanisms operating in episodic resource exchanges. Emotions have been suggested to play important roles in social exchanges (Lawler, 2001). For instance, when leaders contribute more resources, members might feel gratitude, happiness, or joy that leads to more effective work behaviors (Lawler, 2001). Additionally, our theoretical speculation for extra findings on the second-stage moderation effect of LMX relationship suggests that members' fear of exploitation might also help explicate why members under different LMX relationships take distinct reciprocation actions in episodic resource transactions. We thus invite future research to explore these potential underlying mechanisms. Moreover, we encourage future research to delve into other types of exchange reciprocations, especially when considering the disparity of the moderating effects of the LMX relationship for direct and indirect forms of reciprocity in our research. Taking extra resources in episodic transactions may trigger members to engage in more dyad-based reciprocations such as offering more interpersonal help to leaders. It might also have crossover effects by motivating members to perform other-targeted indirect reciprocations such as providing help toward colleagues, voicing more to improve the work efficiency, and displaying pro-organization behaviors (Liden et al., 1997; Wilson et al., 2010). Future research thus could examine these different forms of reciprocation and further explore how the LMX relationship quality affects the nature of reciprocations that members provide. Furthermore, episodic resource transactions may also give leaders advantages such as leadership recognition and career development (Wilson et al., 2010). Future

[11] We conducted an online experimental study (Amazon Mechanical Turk) to examine the proposed direct and indirect effects of resource contribution surplus. We manipulated the balance conditions of an episodic resource exchange. Participants were randomly assigned to one of the three conditions of an episodic exchange (Buunk et al., 1993): one experimental condition (i.e., contribution surplus: leader contribution > member contribution) and two control conditions (i.e., contribution deficit: leader contribution < member contribution; contribution balance: leader contribution = member contribution). Participants completed questions assessing their sense of obligation to reciprocate, work engagement tendency, and intentions to contribute in the next episode. Results showed that resource contribution surplus had a significant direct effect on sense of obligation to reciprocate ($F_{(2, 217)} = 30.38$, $p < .01$), work engagement tendency ($F_{(2, 217)} = 49.29$, $p < .01$), and intentions to contribute in the next episode ($F_{(2, 217)} = 18.89$, $p < .01$). The indirect effects of resource contribution surplus on two outcome variables via sense of obligation to reciprocate were significant (work engagement tendency: indirect effect = .34, SE = .06, 95% CI [.24, .50]; intentions to contribute in the next episode: indirect effect = .39, SE = .06, 95% CI [.28, .51]). We omitted the experiment for brevity but details are available from the first author.

research could also investigate how episodic transactions affect leaders' transient responses.

Conclusion

Our research investigated how episodic resource contribution surplus affects members' state work engagement and subsequent resource contribution via momentary obligation experience. We have taken an initial but solid step toward understanding how leaders and members fluctuate their resource transactions across episodic work interactions. Our findings encourage a broader view of the exchange of leader-member dyads not only as a static relationship quality, but also as an aspect of the ongoing stream of resource giving and taking episodes that flows from and composes LMX.

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Appendix

Equations to Examine the Moderated Mediation Effects of Resource Contribution Surplus on Two Outcomes

To reduce multicollinearity and facilitate model estimation, we group-mean- centered variables at the episode level and grand-mean-centered LMX relationship quality (at the employee level) in our analyses (Enders & Tofighi, 2007; Hofmann et al., 2000).

Our multilevel polynomial regression analysis first involves the examination of the main effect of episodic resource contribution surplus (i.e., the incongruence between leader and member contributions) on the mediator (i.e., momentary sense of obligation to reciprocate). We estimated the following equation (Model 1, Table 2):

$$\text{Med} = \gamma_{00} + \gamma_{10}\text{LC} + \gamma_{20}\text{MC} + \gamma_{30}\text{LC}^2 + \gamma_{40}\text{LC} \times \text{MC} + \gamma_{50}\text{MC}^2 + e; \qquad \text{(Model 1)}$$

where Med represents the mediator, momentary sense of obligation to reciprocate, LC represents leader contribution, and MC represents member contribution. Although our focus was on the incongruence between leader and member contribution, we also included three second-order polynomial terms (i.e., LC^2, $\text{LC} \times \text{MC}$, and MC^2) into the equation to provide a rigorous test on the incongruence effect (Edwards & Parry, 1993; Edwards & Cable,

2009). These three second-order polynomial terms were calculated with group-mean-centered leader contribution and member contribution. The slope of the incongruence line was equal to $\gamma_{10} - \gamma_{20}$.

Then, we estimated the following equation (Model 2, Table 2) to examine the boundary condition of LMX relationship quality for the incongruence effect on the mediator:

$$\begin{aligned}
\text{Med} = \; & \gamma_{00} + \gamma_{01}\text{LMX} + \gamma_{10}\text{LC} + \gamma_{20}\text{MC} + \gamma_{30}\text{LC}^2 \\
& + \gamma_{40}\text{LC} \times \text{MC} + \gamma_{50}\text{MC}^2 + \gamma_{11}\,\text{LC} \times \text{LMX} \\
& + \gamma_{21}\text{MC} \times \text{LMX} + \gamma_{31}\text{LC}^2 \times \text{LMX} \\
& + \gamma_{41}\text{LC} \times \text{MC} \times \text{LMX} + \gamma_{51}\text{MC}^2 \times \text{LMX} \\
& + e; \\
& \qquad\qquad\qquad\qquad\qquad\qquad\qquad \text{(Model 2)}
\end{aligned}$$

where LMX represents the moderator (i.e., LMX relationship quality). We included the moderator (Level 2) as a predictor of within-dyad random slopes of five polynomial terms with momentary sense of obligation to reciprocate in the MSEM model (Vogel et al., 2016). After rearranging and collecting like polynomial terms, the equation becomes:

(Appendix continues)

$$\text{Med} = \gamma_{00} + (\gamma_{10} + \gamma_{11}\text{LMX}) \times \text{LC} + (\gamma_{20} + \gamma_{21}\text{LMX}) \times \text{MC}$$
$$+ (\gamma_{30} + \gamma_{31}\text{LMX}) \times \text{LC}^2 + (\gamma_{40} + \gamma_{41}\text{LMX}) \times \text{LC}$$
$$\times \text{MC} + (\gamma_{50} + \gamma_{51}\text{LMX}) \times \text{MC}^2 + \gamma_{01}\text{LMX} + e.$$

Based on this equation, we estimated the slope of the incongruence line at two conditional values of the moderator (i.e., 1 *SD* above and below the mean; Cohen et al., 2003). The slope of the incongruence line was equal to $(\gamma_{10} - \gamma_{20}) + (\gamma_{11} - \gamma_{21}) \times$ LMX_l when the LMX relationship quality was low and it was equal to $(\gamma_{10} - \gamma_{20}) + (\gamma_{11} - \gamma_{21}) \times$ LMX_h when the LMX relationship quality was high.

To test the indirect effect of episodic resource contribution surplus on outcome variables, we first estimated the following equation (Model 3 or 6, Table 2) that examines the main effect:

$$Y = \gamma_{00} + \gamma_{10}\text{LC} + \gamma_{20}\text{MC} + \gamma_{30}\text{LC}^2 + \gamma_{40}\text{LC} \times \text{MC} + \gamma_{50}\text{MC}^2$$
$$+ e; \qquad\qquad\text{(Model 3 or 6)}$$

where *Y* represents outcome variables (i.e., state work engagement or member contribution in Episode $t + 1$). Then, we included the mediator into the MSEM model, yielding the following equation (Model 4 or 7, Table 2):

$$Y = \gamma_{00} + \gamma_{10}\text{LC} + \gamma_{20}\text{MC} + \gamma_{30}\text{LC}^2 + \gamma_{40}\text{LC} \times \text{MC} + \gamma_{50}\text{MC}^2$$
$$+ \gamma_{60}\text{Med} + e. \qquad\qquad\text{(Model 4 or 7)}$$

To further estimate the direct effect, we created a block variable using the coefficients obtained from Model 1;

$$\text{Block variable} = \gamma_{10}\text{LC} + \gamma_{20}\text{MC} + \gamma_{30}\text{LC}^2 + \gamma_{40}\text{LC} \times \text{MC}$$
$$+ \gamma_{50}\text{MC}^2.$$

Path *a* (episodic resource contribution surplus → momentary sense of obligation to reciprocate) estimate was obtained by regressing momentary sense of obligation to reciprocate on the block variable; Path *b* (momentary sense of obligation to reciprocate → outcome variables) estimates were obtained by regressing outcome variables on momentary sense of obligation to reciprocate with controlling for the effects of five polynomial terms.

To examine the proposed conditional indirect effects of episodic contribution surplus on outcome variables, we estimated the following first-stage moderated-mediation model:

$$Y = \gamma_{00} + \gamma_{01}\text{LMX} + \gamma_{10}\text{LC} + \gamma_{20}\text{MC} + \gamma_{30}\text{LC}^2$$
$$+ \gamma_{40}\text{LC} \times \text{MC} + \gamma_{50}\text{MC}^2 + \gamma_{60}\text{Med} + \gamma_{11}\text{LC}$$
$$\times \text{LMX} + \gamma_{21}\text{MC} \times \text{LMX} + \gamma_{31}\text{LC}^2 \times \text{LMX}$$
$$+ \gamma_{41}\text{LC} \times \text{MC} \times \text{LMX} + \gamma_{51}\text{MC}^2 \times \text{LMX}$$
$$+ e; \qquad\qquad\text{(Model 5 or 8)}$$

After rearranging and collecting like polynomial terms, the equation becomes:

$$Y = \gamma_{00} + (\gamma_{10} + \gamma_{11}\text{LMX}) \times \text{LC} + (\gamma_{20} + \gamma_{21}\text{LMX})$$
$$\times \text{MC} + (\gamma_{30} + \gamma_{31}\text{LMX}) \times \text{LC}^2 + (\gamma_{40} + \gamma_{41}\text{LMX})$$
$$\times \text{LC} \times \text{MC} + (\gamma_{50} + \gamma_{51}\text{LMX}) \times \text{MC}^2 + \gamma_{01}\text{LMX}$$
$$+ \gamma_{60}\text{Med} + e.$$

To further estimate the indirect effects of episodic contribution surplus on outcome variables at high and low conditions of the LMX relationship quality, we created block variable using the coefficients obtained from Model 2.

For the high LMX condition:

$$\text{Block variable} = (\gamma_{10} + \gamma_{11} \times \text{LMX}\_\text{h}) \times \text{LC} + (\gamma_{20} + \gamma_{21}$$
$$\times \text{LMX}\_\text{h}) \times \text{MC} + (\gamma_{30} + \gamma_{31} \times \text{LMX}\_\text{h})$$
$$\times \text{LC}^2 + (\gamma_{40} + \gamma_{41} \times \text{LMX}\_\text{h}) \times \text{LC} \times \text{MC}$$
$$+ (\gamma_{50} + \gamma_{51} \times \text{LMX}\_\text{h}) \times \text{MC}^2;$$

For the low LMX condition:

$$\text{Block variable} = (\gamma_{10} + \gamma_{11} \times \text{LMX}\_\text{l}) \times \text{LC}$$
$$+ (\gamma_{20} + \gamma_{21} \times \text{LMX}\_\text{l}) \times \text{MC} + (\gamma_{30} + \gamma_{31}$$
$$\times \text{LMX}\_\text{l}) \times \text{LC}^2 + (\gamma_{40} + \gamma_{41} \times \text{LMX}\_\text{l})$$
$$\times \text{LC} \times \text{MC} + (\gamma_{50} + \gamma_{51} \times \text{LMX}\_\text{l}) \times \text{MC}^2;$$

(*Appendix continues*)

Conditional Path a (episodic resource contribution surplus $\rightarrow$ momentary sense of obligation to reciprocate) estimate was obtained by regressing momentary sense of obligation to reciprocate on the block variable under high or low LMX relationship quality conditions; Path b (momentary sense of obligation to reciprocate $\rightarrow$ outcome variables) estimates were obtained by regressing outcome variables on momentary sense of obligation to reciprocate with controlling for the effects of five polynomial terms and their interactions with LMX relationship quality.

We conducted supplementary analyses in Footnote 8 to examine the conditional indirect effects of episodic contribution surplus on outcome variables with the moderating role of LMX relationship quality at both stages by estimating the following dual-stage moderated mediation model:

$$Y = \gamma_{00} + \gamma_{01}LMX + \gamma_{10}LC + \gamma_{20}MC + \gamma_{30}LC^2$$
$$+ \gamma_{40}LC \times MC + \gamma_{50}MC^2 + \gamma_{60}Med + \gamma_{11}LC \times LMX$$
$$+ \gamma_{21}MC \times LMX + \gamma_{31}LC^2 \times LMX + \gamma_{41}LC \times MC$$
$$\times LMX + \gamma_{51}MC^2 \times LMX + \gamma_{61}Med \times LMX$$
$$+ e; \tag{Model 9}$$

After rearranging and collecting like polynomial terms, the equation becomes:

$$Y = \gamma_{00} + (\gamma_{10} + \gamma_{11}LMX) \times LC + (\gamma_{20} + \gamma_{21}LMX)$$
$$\times MC + (\gamma_{30} + \gamma_{31}LMX) \times LC^2$$
$$+ (\gamma_{40} + \gamma_{41}LMX) \times LC \times MC$$
$$+ (\gamma_{50} + \gamma_{51}LMX) \times MC^2 + \gamma_{01}LMX$$
$$+ (\gamma_{60} + \gamma_{61} \times LMX) \times Med + e.$$

Conditional Path a (episodic resource contribution surplus $\rightarrow$ momentary sense of obligation to reciprocate) estimate was obtained by regressing momentary sense of obligation to reciprocate on the block variable under high or low LMX relationship quality conditions (see above for the computations of block variables at different LMX conditions); conditional Path b (momentary sense of obligation to reciprocate $\rightarrow$ outcome variables) estimates were obtained by regressing outcome variables on momentary sense of obligation to reciprocate under high or low LMX relationship quality conditions with controlling for the effect of with controlling for the effects of five polynomial terms and their interactions with LMX relationship quality.