



Affect and leader-member exchange in the new millennium: A state-of-art review and guiding framework

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ABSTRACT

The idea that affect plays a key role in leader-member exchange (LMX) processes is not new, but it has become a subject of considerable research attention since the turn of the Millennium. This interest has, however, resulted in a multiplicity of views that have tended to obfuscate rather than clarify the affect-LMX nexus. To deal with this lack of clarity, we conducted a systematic integration of affect-LMX literature published in leading journals since 2000, including the role of personal affectivity, discrete affect, emotional intelligence, emotional labor, and affective climate. We structured our review using a multilevel framework of affect that encompasses five levels of analysis: (1) within-person, (2) between persons, (3) interpersonal, (4) team, and (5) organizational levels; as well as consideration of cross-level effects. We address in particular three fundamental issues that we argue may have hampered the development of the affect-LMX nexus in the literature: theoretical diversity, problems of data analysis, and measurement issues. We conclude by discussing opportunities for future research across the different levels and develop a set of research questions that we hope will help to promote research into the role of affect in LMX.

Introduction

The idea that affect plays a role in the development of leader-member exchange (LMX) processes is not new. It was first mentioned or studied by Vecchio, Griffith, and Hom (1986) and Dienesch and Liden (1986), and subsequently tested in field research by Day and Grain (1992) and Bauer and Green (1996). Four years later, Ashkanasy and his colleagues (Ashkanasy & Tse, 2000; Fisher & Ashkanasy, 2000) took this notion a step further, proposing that affect is in fact of central importance in LMX development and maintenance processes (see also Ashkanasy, Härtel, & Daus, 2002). Since then – and especially since the turn of the Millennium – scholarly interest in this idea has grown exponentially. Concomitant with this interest, however, the emergent theoretical frameworks and methodologies have created a confusing diversity of thoughts concerning the affect-LMX relationship, which often involve different timespans and organizational levels (e.g., Day & Miscenko, 2015; Gooty, Connelly, Griffith, & Gupta, 2010; Gooty, Serban, Thomas, Gavin, & Yammarino, 2012; Tse, Troth, & Ashkanasy, 2015; Yammarino, Dionne, Chun, & Dansereau, 2005).

These new theories and methodologies cover both micro and macro perspectives on LMX and affect. More micro processes include

momentary affective variations, dyadic affective experiences, and individual perceptions at the within-person, between persons and interpersonal levels of analysis (Fisher & To, 2012; Tse & Ashkanasy, 2015; Tse, Lam, Lawrence, & Huang, 2013). More macro processes include shared perceptions, collective schemas, and social-relational contexts at team and organizational levels of analysis (Ashkanasy, 2003; Erdogan & Bauer, 2010; Tse, Dasborough, & Ashkanasy, 2008). Over the last decade, however, scholars have also proposed new theories that integrate across macro and micro processes to study the intersection of affect and LMX (Tse et al., 2015) that may provide a way forward for LMX researchers wishing to study the role played by affect.

Consistent with this aim, it seemed timely for us to review the emerging literature in this field, and especially to attempt to synthesize the different research streams in this topic. In particular, we aimed to examine the central role played by affect in determining the nature of dyadic leader-follower relationships at different levels of organizational analysis. To accomplish this, we conducted a state-of-the-art qualitative review of the literature on LMX published between 2000 and 2017, focusing on the role of affect at five levels of analysis: (1) within-person, (2) between persons, (3) interpersonal, (4) team, and (5) organizational levels, as well as potential effects across multiple levels of analysis.

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Specific topics within our review include the role of affect-related constructs such as personal affectivity, discrete affect, emotional intelligence (EI), emotional labor (EL), and affective climate in LMX development and maintenance processes. As such, our review examines multiple mediating and moderating factors (e.g., Gooty et al., 2010, 2012), including the notion that such effects might evolve over different time intervals (Fisher & To, 2012).

We argue that our review makes two key contributions to the growing literature on the role of affect in LMX. First, we respond to calls by scholars (e.g., see Gooty et al., 2010; Rajah, Song, & Arvey, 2011; Tse et al., 2015) to unify the diversity of ideas on the connection between LMX and affect-related phenomenon and to highlight the central role played by affect in interpersonal interactions between leaders and followers. Second, we do this across multiple levels of analysis (cf. Ashkanasy, 2003; Ashkanasy & Dorris, 2017). Both of these contributions enable us to identify emerging patterns regarding the role of affect-related constructs in LMX processes at different levels of analysis and also across levels. In this regard, although several qualitative reviews or meta-analyses have been undertaken that focus on LMX (e.g., Gerstner & Day, 1997) or affect research (e.g., Rajah et al., 2011), no comprehensive scholarly reviews to date seem to have examined literature solely intended to capture the relationship between affect and LMX. As such, we argue that our review is the first to consolidate theory, methodology, and findings concerning the role of affect-related constructs in LMX processes across different levels of analysis (e.g., Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gooty et al., 2010, 2012; Rajah et al., 2011; Martin, Guillaume, Thomas, Lee, & Epitropak, 2016; Tse et al., 2015).

More specifically, we provide a conceptual definition of two key constructs - LMX and affect and also a summary each major theoretical framework linking affect and LMX constructs, and discuss the appropriate use of each theory at each of five levels of analysis. We then discuss how LMX researchers might deal with some of the traditionally difficult issues in the field. For example, Gooty and Yammarino (2011), point out that LMX studies usually fail to conceptualize, to measure, or to analyze data at the dyadic level of analysis properly. As such, these researchers risk ignoring a critical aspect of the dyadic nature of constructs (which constitute an important basis for broader social contexts, e.g., teams and organizations). In particular, LMX researchers rarely collect reciprocal data on affect-related variables (e.g., emotional intelligence or emotional experience in response to the LMX process within a social context, see Gooty & Yammarino, 2011; Krasikova & LeBreton, 2012; Tse & Ashkanasy, 2015) from both the leader and follower.

Conceptual definition of key constructs

Leader-member exchange (LMX)

Dansereau, Graen, and Haga (1975) first introduced the notion of LMX (originally called “vertical dyad linkage”) as a means to recognize that leaders adopt different leadership styles to form relationships with individual subordinates based on their different needs, attitudes and personalities. In essence, LMX suggests that leaders and subordinates develop unique dyadic relationships over time as they influence each other and negotiate their roles in their ongoing interactions (Dansereau et al., 1975). LMX can be viewed as either a process of reciprocal social exchange (Blau, 1964) or as a continuous role making process (Katz & Kahn, 1978) influenced by the expectations and needs of both leaders and subordinates in their relationships (Dansereau et al., 1975). Thus, both social exchange and role theory perspectives underpin the evolution of LMX theory and research.

Affect, emotion, and mood

This construct can be conceptualized as trait affect (i.e., enduring

affective characteristics or core affect) or state affect (i.e., current mood and emotions), depending on duration. According to Russell and Barrett (1999), trait or core affect embodies “the most elementary consciously accessible affective feelings that need not be directed at anything” (p. 806). State affect, on the other hand, varies over time within-person. Similar to Kelly and Barsade (2001) and Ashforth and Humphrey (1995), we define affect as a subjective feeling state. This broad definition includes both emotion (i.e., more intense, object-oriented) and mood (i.e., more diffuse, not object-oriented). This definition is also supported in affective events theory (AET), where Weiss and Cropanzano (1996) include emotional reactions and mood changes within their affective response framework. Thus, the terms mood, emotion, and affect may all be seen to represent the broader notion of “affect” in this review.

Method

To conduct our review, we first ran a search for LMX and relevant affective constructs in a variety of databases, including Web of Science, PsycINFO, Scopus, ABI-Inform, and Google Scholar. We restricted our search to articles published since 2000 and only included those in quality journals that conjointly looked at LMX and affect (i.e., specifically rejecting any article that dealt with either LMX alone and/or looked at an affective construct only peripherally). We added both empirical and theoretical articles to our database sequentially, searching first for “emotion” (130 articles identified), then “affect” (30), “affective events theory” (21), “appraisal theory” (6), “emotions as social information” (5), “emotional contagion” (1), “affective tone” (0), and “affective climate” (6). This resulted in the identification of 199 relevant articles. After filtering for “A*” or “A” journals (as ranked by the Australian Business Deans Council; ABDC) with a *Clarivate Analytics Web of Science* 2-year impact factor > 1.50, we ended up with a final set of 80 peer-reviewed articles dealing with LMX and affect that were published in top-tier journals between 2000 and 2017. See Table 1 for a summary of journal titles, showing the number of articles published in each journal.

Theoretical frameworks

In this section, we review five key theoretical frameworks that we used to understand the relationships between LMX and affect-related constructs across five levels of analysis: (1) affective events theory (AET), (2) the affect theory of social exchange (ATSE), (3) emotional contagion theory (ECT), (4) the appraisal theory of emotion (ATE), and (5) the emotions as social information theory (EASI). Each of these theoretical frameworks has its own focus, assumptions, functions, and characteristics that guide the development of major propositions and hypotheses in relation to LMX-affect phenomena across multiple levels of conceptualization and analysis. See Table 2 for a summary of articles using each of the theoretical frameworks we identified.

Affective events theory (AET)

First proposed by Weiss and Cropanzano (1996) AET, at its core, describes within-person changes in affective states that arise in response to aspects of the organizational environment; conceptualized as either positive or negative affective events (Cropanzano et al., 2017). According to this theory, the accumulation of positive and negative affective events leads over time to affective states in individuals that, in turn, have consequences for their attitudinal states and behavioral responses (Butts, Becker, & Boswell, 2015; Dasborough, 2006).

LMX researchers have tended to use AET as a conceptual framework to understand the emotional experiences that arise from leader-follower relationships, and in particular the nature of subsequent emotional expressions and behaviors that arise from LMX events (Ashkanasy, 2002; Ashkanasy, Humphrey, & Huy, 2017; Butts et al., 2015;

Table 1
Articles on LMX and affective constructs in top-tier journals: 2000-onwards.

Journal	Impact factor	Articles published
Academy of Management Annals	9.741	1
Academy of Management Journal	6.233	3
Academy of Management Review	7.288	2
Annual Review of Organizational Psychology and Organizational Behavior	4.478	1
Asia Pacific Journal of Management	2.135	2
Australian Journal of Management	1.400	1
Emotion Review	4.730	1
European Journal of Work and Organizational Psychology	2.208	3
Frontiers in Psychology	2.463	1
Group and Organization Management	1.904	2
Human Relations	2.619	1
Human Resource Management	1.798	2
Human Resource Management Review	2.236	1
International Journal of Hospitality Management	2.061	2
International Journal of Human Resource Management	1.262	4
Journal of Applied Psychology	3.810	5
Journal of Business and Psychology	2.250	4
Journal of Business Ethics	1.837	5
Journal of Business Research	2.129	1
Journal of Management	6.051	3
Journal of Occupational and Organizational Psychology	2.059	3
Journal of Occupational Health Psychology	2.000	1
Journal of Organizational Behavior	2.986	4
Management and Organization Review	3.277	2
Motivation and Emotion	1.612	1
Organizational Behavior and Human Decision Processes	2.805	1
Personality and Individual Differences	1.946	1
The Leadership Quarterly	2.938	21
Work & Stress	2.467	1

N = 80

Dasborough, 2006; Gaddis, Connelly, & Mumford, 2004; Gooty et al., 2010; Humphrey et al., 2016; Rajah et al., 2011). Thus, leaders are viewed as important organizational players who, via their behavior (e.g., giving feedback, allocating tasks etc.) and mood (e.g., enthusiastic, excited, angry, distressed etc.) trigger affective events that have consequences for employees and teams (Dasborough, 2006; Gooty et al., 2010; Tse et al., 2008). Ashkanasy and Daus (2002), for example, describe how an employee being hassled by a demanding boss (an affective event) becomes angry and disgruntled (an affective state), suffers job dissatisfaction (an attitudinal state), and consequently engages in deviant behavior (behavioral consequence).

In a review of leadership and affect research, Gooty et al. (2010) broadly classified leadership behaviors as favorable and unfavorable (i.e., affective events) in terms of how such behaviors affect followers' moods at work. Unfavorable leader behaviors (which can be conceptualized as “hassles”) include abusive supervision, interpersonal injustice, and autocratic leader behaviors; and are generally found to lead to negative follower affect and aversive outcomes. By contrast, favorable leader behaviors such as charismatic and supportive leadership (which can be conceptualized as “uplifts”) evoke positive affect and behaviors in their followers.

As shown in Table 2, authors used aspects of AET in sixteen of the articles canvassed in this review. Four studies conceptualized (to a greater or lesser extent) within-person phenomena such as reactions to leadership departure and succession stages (e.g., Ballinger, Lehman, & Schoorman, 2010; Ballinger & Schoorman, 2007; Ballinger, Schoorman, & Lehman, 2009), four examined relationships at the between persons level between LMX and affective constructs (e.g., Dasborough, 2006; Medler-Liraz & Kark, 2012), two used an

interpersonal level approach (e.g., Clarke & Mahadi, 2017; Tse et al., 2013), and six articles investigated the relationships between LMX and affective phenomena from a multilevel perspective (e.g., Rajah et al., 2011). Most recently, AET has been used across levels to understand the development of the LMX relationship through three stages: role taking (between persons-level); role making (within-person-level), and role routinization (team-level; Cropanzano et al., 2017).

The affect theory of social exchange (ATSE)

This theory addresses the specific role played by affect in the social exchange process between leaders and followers (see Barsade, 2002; Tse et al., 2008; Tse & Ashkanasy, 2008). As its title implies, this theory explains how and why affect is produced within a social exchange relationship – involving a leader and a follower in the instance of this review (Lawler, 2001). The theory posits in particular that these processes produce positive and negative affect experienced by both parties involved that, in turn, influence how individuals feel about the social exchange relationship (Lawler, 2001). When outcomes are positive on the one hand, both leader and follower experience an uplift (e.g., happiness, excitement, pride or satisfaction). On the other hand, when outcomes are negative, both parties are likely to experience a hassle (e.g., sadness, disappointment, shame or anger; see Lawler, 2001).

As presented in Tables 2, 26 of the articles identified for this review relied on the ATSE theory as an overarching framework, including 13 that examined the relationships between LMX and affect-related constructs at the between persons level (e.g., Chen et al., 2012; Colquitt et al., 2013). Another six articles investigated such relationships at the interpersonal level (e.g., Lam et al., 2016; Sin et al., 2009). Two articles applied the ATSE to study LMX and affective phenomena from a team-level perspective (e.g., Bernerth & Hirschfeld, 2016), and five studies took a multilevel view (e.g., Nie & Lamsa, 2015; Sears & Holmvall, 2010).

Emotional contagion theory (ECT)

In proposing ECT, Hatfield et al. (1992) posited that individuals “catch” or transfer the emotions of others unconsciously and unintentionally. The theory is often applied to explain affect transfer within dyads (e.g., Fujimura, Sato, & Suzuki, 2010) and groups (e.g., Collins, Lawrence, Troth, & Jordan, 2013). Associated with this idea is an individual difference variable, emotional contagion susceptibility (Doherty, 1997), which has been promoted as an explanation for the variation of emotional experiences found across employees in response to leader-follower interactions (Dasborough & Ashkanasy, 2002; Rajah et al., 2011) with higher susceptibility seen to increase the likelihood of an individual converging with their leaders' affect (Johnson, 2008). Research has nonetheless consistently demonstrated the contagion of leaders' affect to their followers (e.g., Sy & Choi, 2013; Sy, Côté, & Saavedra, 2005).

Although our literature search found only one article that addressed LMX and emotional contagion as a unique construct, we found that LMX researchers actually theorized and/or empirically demonstrated contagion processes in interactions between leaders and followers in no less than eleven studies (see Table 2). One conceptual study (i.e., Robert & Wilbanks, 2012) focused on humor at the within-person level, four studies have drawn on aspects of ECT at the between persons level (e.g., Newcombe & Ashkanasy, 2002), and six studies at the multilevel (e.g., Tse et al., 2008). As such, LMX seems to play a vital role in facilitating the contagious processes among members in dyads and within workgroups and eventually transferring to all members of a workgroup (Barsade, 2002; Tee, Paulsen, & Ashkanasy, 2013; Tse & Ashkanasy, 2008).

Table 2
Main theoretical frameworks, LMX & affective factors; and example publications.

Theory	Level of analysis	Factors in LMX & affect research	Number of articles	Example studies
Affective Events Theory (AET; Weiss & Cropanzano, 1996)	Within-person	LMX, followers' affect, humor	4	Ballinger and Schoorman (2007); Koopmann, Lanaj, Bono, and Campana (2016)
	Between persons	LMX, leaders' emotional expressions, leaders' affect, followers' affect, followers' expressed hostility	4	Ashkanasy (2002); Dasborough (2006); Elfenbein (2007); Medler-Liraz and Kark (2012)
	Interpersonal	LMX, LMX similarity, follower EI, leader EI, followers' contempt	2	Clarke and Mahadi (2017); Tse et al. (2013)
	Team	–	0	–
	Organizational	–	0	–
	Multilevel	LMX, trait affect, EI, emotional competencies, emotional expressiveness, emotional contagion, affective climate	6	Ashkanasy and Dorris (2017); Ashkanasy and Humphrey (2011); Cropanzano, Dasborough, and Weiss (2017); Dasborough, Ashkanasy, Tee, and Tse (2009); Gooty et al. (2010); Rajah et al. (2011)
	Within-person	–	0	–
	Between persons	LMX, EI, affect, justice, psychological contract violation, affective commitment, affectivity, envy, interpersonal affect, leaders' emotion regulation, leaders' emotion management strategies, followers' emotional masking	13	Chen, Lam, and Zhong (2012); Colquitt et al. (2013); Dahling, Chau, and O'Malley (2012); Dulac, Coyle-Shapiro, Henderson, and Wayne (2008); Dulebohn et al. (2012); Dulebohn, Wu, and Liao (2017); Fisk and Friesen (2012); Greguras and Ford (2006); Hochwarter (2005); Kim, O'Neill, and Cho (2010); Little, Gooty, and Williams (2016); Loi, Mao, and Ngo (2009); Xu, Liu, and Guo (2014)
	Interpersonal	LMX, LMX agreement between leaders and followers, LMX dissimilarity between followers, leader EI, follower EI, follower affectivity, sympathy, envy, contempt	6	Brower, Schoorman, and Tan (2000); Clarke and Mahadi (2017); Davis and Gardner (2004); Lam, Huang, Waller, and Chan (2016); Liao, Liu, and Loi (2010); Richards and Hackett (2012); Sin, Nahrang, and Morgeson (2009)
	Team	LMX within-team differentiation, affective team commitment, leaders' affect	2	Berneth and Hirschfeld (2016); Le Blanc and González-Romá (2012)
Emotional contagion/affective climate (Hatfield, Cacioppo, & Rapson, 1992)	Organizational	–	0	–
	Multilevel	LMX, congruence in emotional stability, emotion-focused coping, guanxi, EI similarity between leaders & followers, workplace friendship, affective climate	5	Berneth, Armenakis, Feild, Giles, and Walker (2008); Major and Morganson (2011); Nie and Lamsa (2015); Sears and Holmvall (2010); Tse et al. (2008)
	Within-person	LMX, humor	1	Robert and Wilbanks (2012)
	Between persons	LMX, leaders' affect, followers' affect, follower hostility, emotional intelligence, workplace friendship, affective climate	4	Liu et al. (2017); Medler-Liraz and Kark (2012); Newcombe and Ashkanasy (2002)
	Interpersonal	–	0	–
	Team	–	0	–
	Organizational	–	0	–
	Multilevel	LMX, trait affect, emotional intelligence, workplace friendship, negative emotions, organizational cynicism, affective climate	6	Ashkanasy and Dorris (2017); Ashkanasy and Humphrey (2011); Cropanzano et al. (2017); Dasborough et al. (2009); Humphrey, Burch, and Adams (2016); Tse et al. (2008)
	Within-person	LMX, followers' affect	1	Ballinger and Schoorman (2007)
	Cognitive Appraisal Theory (Lazarus, 1991); Appraisal Theory (Scherer, Shorr, & Johnstone, 2001)	Between persons	LMX, affective commitment, follower affect	2
Interpersonal		–	0	–
Team		–	0	–
Organizational		–	0	–
Multilevel		LMX, emotions, emotional competencies	1	Gooty et al. (2010)
Within-person		–	0	–
Between persons		LMX, followers' affect, followers' perception of leaders' affect, leaders' hostility, sympathy, compassion	2	Liu et al. (2017)
Interpersonal		LMX, leaders' hostility, sympathy, compassion	1	Methot, Melwani, and Rothman (2017)
Team		–	0	–
Organizational		–	0	–
Multilevel	LMX, emotions, emotional competencies, followers' workplace loneliness, leader compassion	2	Gooty et al. (2010); Peng, Chen, Xia, and Ran (2017)	
Emotions As Social Information (EASI) model (Van Kleef, 2009); Affect as information theory	Within-person	LMX, followers' affect	1	Ballinger and Schoorman (2007)
	Between persons	LMX, affective commitment, follower affect	2	Dulac et al. (2008); Elfenbein (2007)
	Interpersonal	–	0	–
	Team	–	0	–
	Organizational	–	0	–
	Multilevel	LMX, emotions, emotional competencies	1	Gooty et al. (2010)
	Within-person	–	0	–
	Between persons	LMX, followers' affect, followers' perception of leaders' affect, leaders' hostility, sympathy, compassion	2	Liu et al. (2017)
	Interpersonal	LMX, leaders' hostility, sympathy, compassion	1	Methot, Melwani, and Rothman (2017)
	Team	–	0	–
Organizational	–	0	–	
Multilevel	LMX, emotions, emotional competencies, followers' workplace loneliness, leader compassion	2	Gooty et al. (2010); Peng, Chen, Xia, and Ran (2017)	

Table 3
Summary of LMX and affect-related constructs research in top-tier journal from 2000–onwards.

Level of analysis	LMX dimension/s	Affect dimension/s	Example studies
Within-person	Overall LMX, Negotiation latitude	Expressed emotion, trait affect, affective reactions, mood, affective wellbeing, humor	Ballinger and Schoorman (2007); Ballinger et al. (2009, 2010); Koopmann et al. (2016); van den Heuvel, Demerouti, and Peeters (2015)
Between persons	Overall LMX, Negotiation latitude, the Liking dimension of LMX	Expressed affect, trait affect, feeling envied, forgiveness, hostility, emotional intelligence, emotional exhaustion, workplace friendship, psychological contract violation, affective commitment, emotion regulation, emotional management strategies	Antonakis, Ashkanasy, and Dasborough (2009); Chen et al. (2012); Cheng, Huang, Lee, and Ren (2012); Dasborough (2006); Lin, Kao, Chen, and Lu (2016); Loi et al. (2009); Pundt and Venz (2017); Schaubroeck and Shao (2012); Schermuly and Meyer (2016); Schyns, Paul, Mohr, and Blank (2005); Skakon, Nielsen, Borg, and Guzman (2010); Tse and Dasborough (2008); Varma and Stroh (2001); Xu et al. (2014); Xu, Loi, and Lam (2015); Zacher, Pearce, Rooney, and McKenna (2014)
Interpersonal	LMX, LMX dissimilarity, RLMX	Contempt, trait affect, interpersonal affect	Clarke and Mahadi (2017); Lam et al. (2016); Tse and Ashkanasy (2015); Tse, Ashkanasy, and Dasborough (2012)
Team	LMX differentiation	Experienced affect, affective commitment to organization, affective commitment to team, team morale	Bernerth and Hirschfeld (2016); Le Blanc and González-Romá (2012); Naidoo, Scherbaum, Goldstein, and Graen (2011)
Organizational	–	–	–
Multilevel	LMX, LMX differentiation	Emotional stability, emotional exhaustion, compassion, loneliness, emotional intelligence, affective climate	Dasborough et al. (2009); Gooty et al. (2010); Hunter, Bedell-Avers, and Mumford (2007); Nie and Lamsa (2015); Peng et al. (2017); Rajah et al. (2011); Tse et al. (2008)

The appraisal theory of emotion (ATE)

This theory holds that emotions result from individuals' evaluations of events (Scherer et al., 2001). Lazarus (1991) notes that individuals evaluate events from three perspectives: (1) relational, (2) motivational, and (3) cognitive. From the relational perspective, the individual appraises the interaction of the person and her or his situational environment. The motivational component involves an evaluation of the situation and how this relates to the individual's goals. Thus, a situation seen to be blocking an individual's goals is evaluated negatively, while a situation that facilitates attainment of goals is evaluated positively. Finally, from the cognitive perspective, the individual weighs up how relevant the situation is to attainment of her or his goals. This, in turn, determines the intensity of the resulting emotional reaction.

According to Lazarus (1991), a basic tenet of ATE is that it is a two-stage process: primary and secondary. In the primary stage of appraisal, the individual evaluates the two key motivational dimensions: relevance and congruence (Smith & Kirby, 2009). In particular, the individual assesses the extent to which the event is judged to be either consistent or inconsistent with their life goals. Secondary appraisal involves assessment of the individual's ability to cope with the emotional consequences arising from the primary appraisal stage. Lazarus and Folkman (1984) theorize further that appraisal results in one of two coping strategies: problem-focused or emotion-focused. Under a problem-focused strategy, the individual seeks to deal directly with the situation that s/he perceives to be the root cause of emotion. Using an emotion-focused strategy, however, the individual seems to deal with the emotions rather than their cause, for example, by taking medication or engaging in emotion-reducing behaviors such as relaxation or exercise. While the common mantra is that problem-focused coping is preferable to emotion-focused coping (because it deals with the cause of the emotion), Gooty, Gavin, Ashkanasy, and Thomas (2014) found in a real-time study of law enforcement interventions that emotion-focused strategies may be the most appropriate in the first instance, especially when intense emotions hamper cognitive effectiveness.

Bauer and Green (1996) argue in particular that emotions are central to the process of trust development implicit in the application of ATE to LMX (see also Ballinger et al., 2009). Table 2 shows that LMX researchers have utilized ATE in four studies included in our review. Only one study focuses at the multilevel and details the role played by primary appraisal in LMX development (Gooty et al., 2010). Table 2 shows that one study in our review focuses at the within-person level (Ballinger & Schoorman, 2007) and two studies focus at the between

persons level (e.g., Dulac et al., 2008). The conclusion from these and other studies is that members' affective reactions to leadership situations are a function of their primary and secondary appraisals of the leadership event.

Emotions as social information (EASI)

van Kleef (2008) developed EASI theory to explain the way individuals consciously seek to regulate their emotional states in response to their perceptions of others' emotional states and displays. van Kleef et al. (2009) found further that members' emotional states are determined to a large extent by their perception of their leader's emotions. It is important to note that the EASI model is essentially a cognitive appraisal process, whereby members actively interpret and utilize their leader's emotional displays in order to determine their own emotional reactions to the leader. While similar to the effect of emotional contagion (cf. Johnson, 2008; Sy et al., 2005), EASI theory implies that members actively pay attention to emotional cues as a part of the appraisal process before settling on an appropriate emotional reaction.

Table 2 indicates that five studies included in our review draw on EASI to understand LMX and affect. Two focused on the between persons level (e.g., Liu et al., 2017), one at the interpersonal level (Methot et al., 2017), and two at the multilevel (Gooty et al., 2010).

The multilevel framework

The basic structure of our multilevel review conforms to Ashkanasy's (2003) five-level multilevel framework, which includes (1) within-person, (2) between persons, (3) interpersonal interactions, (4) team and (5) organizational levels. We also address a cross-level (i.e., multilevel) framework that encompasses all five of the levels in the Ashkanasy model. See Table 3 for a summary of studies at each level.

Level 1 (within-person)

This level is the foundation of the five-level model and encapsulates momentary within-person variations of affect experienced by both leaders and followers during their daily interactions. As we mentioned earlier (and shown in Table 2), AET is a major theoretical framework used to understand affect-related phenomena at this level of analysis. As such, AET has been applied to all of the articles identified in our review at this level. Perhaps reflecting the nature of within-person phenomena, it is important to note that none of these studies focus

exclusively at the within-person level. Authors typically focus on the changing nature of follower affect (e.g., see [Koopmann et al., 2016](#)), specific events such as leadership succession (e.g., see [Ballinger et al., 2009](#), [Ballinger et al., 2010](#)), or job crafting opportunities (e.g., see [van den Heuvel et al., 2015](#)).

Many of these studies emphasize cross level effects. For example, [Koopmann et al. \(2016\)](#) used experience sampling methodology across ten working days to show that positive work events experienced by employees positively predicted fluctuations in their daily promotion focus (i.e., aspiration and growth focus) (within-person level), but that this effect is weaker when employees have high-quality relationships with their leaders. In another example, [Ballinger et al. \(2010\)](#) used a repeated measures laboratory design to show that an employee's perceived LMX quality with a workgroup leader is related to their affective reaction after that leader departs (i.e., an affective event) as well as their subsequent trust in the new leader or successor (all examined at the within-person level). [Ballinger and Schoorman \(2007\)](#) also draw on theories of cognitive appraisal, relational leadership and trust to explain the impact of leadership succession on within-person affective reactions and resulting attitudes and behaviors.

Summary

Although we found only a small number of articles at this level (see [Table 3](#)), we view Level 1 approaches to LMX and affect-related constructs as having particular promise to reveal and to explain the development and progression of the relationships between these major constructs over time. In particular, studies at this level enables researchers to look at the dynamic nature of LMX relationships over time ([Lord, Day, Zaccaro, Avolio, & Eagly, 2017](#)).

Level 2 (between persons)

This level captures stable differences between persons in affective experiences and attitudes that influence LMX relationship formation and maintenance ([Ashkanasy, 2003](#)). [Table 3](#) shows the majority of research articles included in this review investigate the relationships between LMX and affect-related constructs at this level (with 49 studies in this level). As we discuss next, scholars have variously viewed the LMX construct (or specific aspects of the construct) as an antecedent, an outcome, a mediating, or a moderating variable. In the following discussion, we examine three categories of variables in this category: (1) trait, (2) non-trait, and (3) affective states.

Trait variables

Traits, which are stable or dispositional characteristics of the leader or follower, constitute the most common form of research into the affect-LMX nexus at the individual level. We found twenty studies that fit this category.

While the role of emotional intelligence (EI) in leadership research is controversial ([Antonakis et al., 2009](#)), seven of the studies we found looked at this construct (one theoretical, and six empirical), which deals with the ability to perceive and to manage emotions ([Ashkanasy & Daus, 2005](#)), finding some positive links (for three out of six empirical studies) between overall EI and LMX quality. Five of the empirical studies (all except [Zacher et al., 2014](#)) examined the effect of followers' EI on LMX quality, although research varied in the use of follower self-ratings of EI (e.g., [Dahling et al., 2012](#)) or leader ratings of the follower's EI (e.g., [Chen et al., 2012](#)). Only one study ([Huang, Chan, Lam, & Nan, 2010](#)) focused on the effects of specific EI abilities on LMX (despite growing evidence that they have differential effects, see [Elfenbein, Polzer, & Ambady, 2007](#)).

In two studies ([Newcombe & Ashkanasy, 2002](#); [Zacher et al., 2014](#)), the authors used EI as a covariate and found no relationship with LMX. Of the four articles that did examine the direct or interactive relationship of EI and LMX, three studies (e.g., [Chen et al., 2012](#); [Huang et al., 2010](#)) found significant positive correlations between EI and LMX ($r = 0.32$ to

0.46 for total EI) and ($r = 0.18$ to 0.33 for EI sub-scales). Owing to the ongoing controversy regarding EI (see [Antonakis et al., 2009](#)), we also determined whether the two different EI measurements of the individual utilized by researchers and both self-report scales (i.e., [Schutte et al., 1998](#); [Wong & Law, 2002](#)) resulted in consistent findings. We also note the meta-analytical reviews by [O'Boyle, Humphrey, Pollack, Hawver, and Story \(2010\)](#) and [Miao, Humphrey, and Qian \(2016, 2017\)](#). Collectively, these studies demonstrate the relationships between different EI measures and various outcomes such as job satisfaction and performance are relatively stable and consistent (irrespective of different EI measurement models).

Other variables at this level of analysis include personality traits of the follower (e.g., [Treadway, Yang, Bentley, Williams, & Reeves, 2017](#)) or the leader ([Zacher et al., 2014](#)). Specific personality variables studies include narcissism, leader wisdom ([Zacher et al., 2014](#)), leader and follower agreeableness, and core self-evaluation ([Sears & Hackett, 2011](#)). Dispositional affect is another common focus (see [Tables 3 and 5](#)). [Elfenbein \(2007\)](#) theorizes that leader and/or follower positive affective disposition benefits LMX quality, while negative affective attributes have more deleterious outcomes. In empirical support of this idea, [Hochwarter \(2005\)](#) found that follower PA and NA disposition interacts with LMX to impact on their job tension (an inverted U-shape relationship) while [Medler-Liraz \(2014\)](#) found that employee NA interacts with perceptions of LMX to impact on the tips received by customers (i.e., work performance).

Non-trait variables

A group of studies also demonstrate how less stable personal variables, such as leaders' use of specific emotional regulation strategies (ER) when dealing with others (i.e., situation modification, cognitive change and suppression), differentially relate to LMX perceptions (e.g., [Little et al., 2016](#)). Additional research in this category includes [Basford, Offermann, and Behrend \(2014\)](#) work showing leader sincerity (versus insincerity) when giving an apology leads to a higher LMX. Another study ([Methot et al., 2017](#)) looked at the disability status of the follower and how this generates ambivalent LMX relationships via mixed emotions.

Affective state

A third group of non-trait studies focuses on the impact of the LMX relationship on individual followers' affect, mood states, affective commitment or affect-driven behavior. In the 27 studies included in this category, LMX is typically viewed as an antecedent. The relationship most frequently tested is the positive impact of LMX on followers' perceived affective commitment (e.g., [Brunetto et al., 2012](#); [Eisenberger et al., 2010](#); [Graves & Luciano, 2013](#)). With the exception of [Dulac et al. \(2008\)](#), however, all the empirical research demonstrating this relationship was cross-sectional.

Researchers are also starting to take a more nuanced look (beyond direct effects) at these relationships. [Kimura \(2013\)](#), for example, demonstrated the interaction effect of follower's political skill and LMX on their affective commitment. [Lai, Chow, and Loi \(2016\)](#) found that perceived LMX quality lowers emotional exhaustion (between persons level) when LMX differentiation is low (cross-level); and [Thomas and Lankau \(2009\)](#) found that LMX lowers employees' stress and increases their well-being. Finally, another stream of research (e.g., [Pan & Lin, 2016](#)) demonstrates the role of LMX in abusive supervision and the consequences for individuals.

Summary. Forty-nine of the articles in this review were conducted at the between persons level of analysis. Of these, 20 focused on a stable characteristic as antecedent to, or a moderator with LMX, and 27 focused on affective states as an outcome variable. Our review of this literature also shows that LMX can be considered as an antecedent, a moderator, a mediator, or an outcome variable.

Level 3 (interpersonal)

At Level 3, affect is conjointly experienced by the leader and follower. We found thirteen studies at this level (see Table 3), which we further classified into three groups: (1) the effect of both members' personal characteristics on their own or the other's attitudes and behaviors, (2) how an individual forms different relationships with other members in different coworker dyads, and (3) the affective reactions that both a supervisor and a subordinate experience within an LMX relationship.

The first perspective focuses on the effect of both members' personal characteristics on their own or the other's attitudes and behaviors, guided by the actor-partner independence model (APIM; Krasikova & LeBreton, 2012). For instance, Richards and Hackett (2012) studied attachment (a relationship-based trait) styles and the interaction between two styles (i.e., attachment anxiety and attachment avoidance) and two emotional regulation strategies. The authors found that these variables interactively relate to the LMX relationship between a leader and a follower in a supervisor-subordinate dyad. Their results also revealed a negative relationship between attachment style and LMX quality that was in turn buffered by emotional regulation strategies.

Guided by the social relations model (SRM; Krasikova & LeBreton, 2012), the second perspective focuses on how individuals form different relationships with other members in different coworker dyads. For example, in two independent field studies, Tse et al. (2013) found that LMX dissimilarity between two subordinates influences their affective reaction directed toward each other in a coworker dyad. Results also revealed that contempt constitutes an underlying affective process that transmits the interactive effect of LMX dissimilarity and social comparison orientation on perceptions of coworker assistance.

The third perspective relates to the affective reactions that both supervisors and subordinates can experience within an LMX relationship. For example, in a qualitative study to understand how subordinates perceive the differential quality of relationships with their supervisors, Tse and Troth (2013) found that subordinates experienced different affective reactions in response to high-quality and low-quality LMX relationships.

Summary

Thirteen articles in our review were conducted at the interpersonal level of analysis. We conclude that three main perspectives have been guided by different conceptual and methodological models developed by Kenny, Kashy, and Cook (2006) to study LMX and affect phenomena in leader-member and member-coworker dyads. We classified these studies in turn into three groups that illustrate the intrinsic nature of LMX and affect as relational phenomena. All the studies at this level dealt with the reciprocal processes of affect that are inherent in LMX quality, including actor-partner independence, social relations, and shared experiences. Overall, the studies reviewed at the interpersonal level demonstrate that, at its core, LMX involves processes of reciprocal interactions.

Level 4 (teams)

According to Ashkanasy's (2003) multilevel framework, team member interactions and dynamics naturally give rise to a variety of affective experiences and affective processes. When viewing LMX through the team lens, it is important to utilize an appropriate aggregation technique to accurately represent the teams' LMX. Researchers can select from a variety of different means to aggregate individually measured variables at the team level, with each approach having merits depending on the nature of the construct and contextual considerations (e.g., aggregation via mean or median LMX, variance in LMX, minimum LMX score or maximum LMX score; Kozlowski & Klein, 2000). Each strategy could also plausibly give meaningful information

about the teams' LMX, and have implications for the affective experiences of the workgroup. LMX is predicated on the presence of differential relationships among followers and leaders, thus researchers have generally used within-group variation in LMX as per a dispersion classification of aggregation (Chan, 1998). Some researchers also take into account teams' mean or median level LMX, which characterize a workgroup's overall LMX (e.g., Bois & Howell, 2006; Henderson, Liden, Glibkowski, & Chaudhry, 2009; Liden, Erdogan, Wayne, & Sparrowe, 2006). As such, these models represent an additive aggregation model (as per Chan, 1998).

As can be seen in Table 3, however, there is a dearth of research at this level, especially in comparison to the between persons and interpersonal levels. We nonetheless found three articles in this category, which appear to present some promising avenues for future team-level LMX and affect research. For example, recent research has emphasized the importance of the lifecycle of a workgroup when considering the affective consequences of LMX differentiation. Naidoo et al. (2011) found that leader-rated LMX within-team differentiation predicts subsequent team performance (i.e., near the end of the 6-month project), but not at earlier time points (which fits with the notion that, before performance effects are found, it takes time for LMX relationships to develop and to perceive others' relationships). While these authors also looked at team development variables including team morale, they found no relationships to LMX differentiation at any point in time.

In another study, Le Blanc and González-Romá (2012) examined within-team differentiation while also acknowledging the median level of LMX within the workgroup (under the assumption that LMX differentiation will have divergent effects under conditions of median high-quality and median low-quality team LMX). These authors found a link with affective team commitment (i.e., an aggregation of individuals' level of affective connection with their team). They found in particular that, when teams had lower quality median LMX, higher LMX differentiation linked to higher affective team commitment. On the other hand, workgroups with higher quality median LMX had higher affective team commitment across the board, irrespective of differentiation levels. Finally, Bernerth and Hirschfeld (2016), who studied within-group LMX differentiation (via SD of individuals' rating of their LMX) with a view to understanding leaders' affective wellbeing, found increased differentiation was related to less positive affect in leaders, and that differentiation was positively related to leaders' job stress only when workgroups had low average LMX quality.

Summary

While there has been relatively little research linking team-level LMX with team affective constructs (a total of three for this review), the articles we found demonstrate the importance of this area for LMX researchers going forward, especially considering the pervasive team-based structure of organizations (e.g., Kozlowski & Ilgen, 2006). The articles especially highlight the importance of considering many conceptualizations of aggregation (i.e., both mean/median and variance). Many affective variables shown to be important to between persons and interpersonal LMX research have yet to be tested at the team level, however. For example, the collective emotional intelligence of a team (Jordan & Troth, 2004) may buffer negative emotional reactions to LMX differentiation.

Level 5 (organization)

This level of analysis deals with the organization as a whole (Ashkanasy, 2003). Constructs which might be examined at this level include affective climate and the LMX network. As Table 3 shows, there are no studies included in our review focusing exclusively on organization-level LMX and affective constructs. Rather, what little research there is tends to view organization-level constructs (e.g., organizational policies, requirement for emotional labor, stress and wellbeing, emotional climate and culture) as having top-down effects positioned

within the five-level multilevel framework (e.g., Ashkanasy & Dorris, 2017).

Multi-and cross-level effects

Of the 22 multilevel articles (see examples in Table 3), only nine comprise empirical work, and these empirical studies span only two levels. Three studies examine within-person and between persons-level effects; one investigates within-person and team-level effects, three look at between persons and interpersonal-level effects and two capture between persons and team-level effects. Bernerth et al. (2008) investigated two-level data exploring the impact of personality differences (e.g., conscientiousness, extraversion, agreeableness, openness and emotional stability) between employees and their supervisors on perceived LMX quality (rated by the employee). Their findings support the notion that supervisor-subordinate personality similarity facilitates a higher quality LMX. Sears and Holmvall (2010) also found EI similarity to be associated with LMX. Both Bernerth et al. (2008) and Sears and Holmvall (2010) collected self-report data using a cross-sectional design. Pertaining specifically to cross-level effects, Ballinger et al. (2010) showed the links between affective reactions (at both the within-person and team level) to a leadership succession event and group performance (team-level).

In terms of between persons and team-level data, Lai et al. (2016) investigated the impact of LMX differentiation within workgroups of Hong Kong travel agents on the relationship between LMX (employee's perception) and emotional exhaustion. Based on self-report data collected across two distinct times, they found that the negative relationships between LMX and emotional exhaustion and between LMX and diminished sense of personal accomplishment are stronger when LMX differentiation is low.

Tse et al. (2008) used data from an Australian banking sample to show that, at the between persons level, LMX is positively related to workplace friendship and that workplace friendship mediates between the LMX and team-member exchange (TMX) relationship. Tse and his colleagues also found a cross-level interaction indicating high-quality LMX is associated with enhanced workplace friendship between employees, especially when affective climate within a workgroup is high.

Finally, based on a Chinese workplace sample, Peng et al. (2017) demonstrated the cross-level moderating role of leader compassion within a workgroup. These authors found that the workplace loneliness of employees has a negative indirect effect on their creativity through LMX, but only if leader compassion within the workgroup is low.

The remaining multilevel studies we identified were conceptual and tended to include more levels of analyses than their empirical counterparts. For example, Ashkanasy and Dorris (2017) present a cross-level view of emotions spanning all five levels and consider bottom-up and top-down effects with AET at its core (Level 1). In this model, affective events (at Level 1) are thought to be directly impacted by LMX processes (conceptualized as Level 4) that have a major effect on the moods and feelings of team members. In contrast, Humphrey et al. (2016) position the emotion and LMX relationship at the interpersonal level to capture dyadic communication between the supervisor and employee and the role that emotion plays in the transfer of perceptions, ideas and feelings.

The most recent research in this genre includes Lord et al. (2017) and Cropanzano et al. (2017). Lord and his colleagues argue that LMX research needs to take a more dynamic role and development approach. Cropanzano and his team similarly examined LMX in terms of three stages: role taking (between persons level), role making (interpersonal level), and role routinization (team level).

Summary

Multilevel approaches appear to offer particular promise to uncover the relationship between affective and LMX processes across different levels of analysis. Moreover, such approaches appear necessary to

examine the role of both personal and situational factors in different attitudinal, behavioral and performance outcomes. The most recent conceptual research in this category suggests that LMX needs to be studied as a form of dynamic role development.

Challenges

Based on our review, we identified three conceptual and methodological challenges that might impede further expansion in this literature. These are: (1) misalignment between theory, measurement, and analysis; (2) data dependence; and (3) construct validity.

Misalignment between theory, measurement, and analysis

The first challenge is a potential misalignment between conceptual definitions, measurement, and analysis at the interpersonal level of analysis. Although LMX has long been conceptualized as a relationship between a supervisor and a subordinate (Graen & Uhl-Bien, 1995), the fundamental notion of a *dyad* (i.e., two parties contributing to their relationship and how their interdependence influences their interactions; Kelley, Holmes, Kerr, Reis, Rusbult, and Van Lange, 2003) has frequently been neglected. For instance, Krasikova and LeBreton (2012) conducted a comprehensive review of dyadic constructs published between 2007 and 2010, and reported that only 12% of 164 studies adopted an appropriate level of theory, measurement, and analysis to capture dyadic relationships between two parties.

In a qualitative review of LMX research, Gooty et al. (2012) also reported that “misalignment between theory and measurement occurred in 68% of the 163 multilevel studies reviewed” and that “up to 86% of the 111 reviewed articles of such misalignment occurred when the dyad level was the theoretical focus of the study” (p. 1095). The results reported in these review studies highlight that a large number of LMX studies fundamentally ignore the core characteristics of a dyad and the potential effects both a supervisor and subordinate can exert within an LMX relationship.

We conclude from the present review that this misalignment continues to hamper studies exploring the LMX-affect nexus. Research typically focuses on data collected from only one party (mainly the subordinate) in the LMX relationship. Seldom are reciprocal data collected from both members of the dyad (see Gooty & Yammarino, 2011; Krasikova & LeBreton, 2012). To illustrate the importance of this point, consider a hypothetical field study designed to examine the reciprocal influence of emotional intelligence and LMX. If the data used in this study were to be collected only from subordinates, it becomes impossible to capture the critical role of supervisor emotional intelligence as a determinant of the overall LMX relationship.

This incomplete understanding of LMX-affect phenomena is evident in the number of studies we found that include only the subordinate-reported measure of LMX and affective constructs. Table 4 presents the measurement methods used for LMX and affect-related constructs across different levels of analysis. At the within-person level, 100% of the LMX and affect studies we found relied solely on subordinate self-report measures. Respectively, 92% and 81% of the studies used only subordinate self-report measures at the between persons level; while 67% and 33% of the same types of studies utilized subordinate self-report measures at the team level. Similarly, 60% purportedly multiple-level studies use self-report measures in LMX or affect taken from only one party in the relationship. These results suggest that leader-reported measures of both LMX and affect are underutilized.

This oversight is especially significant in view of Gerstner and Day's (1997) finding that the sample-weighted correlation between supervisors' and subordinates' rating of LMX is only 0.29. In another meta-analytical review, Sin et al. (2009) likewise found that the sample-weighted correlation between supervisors' and subordinates' rating of LMX is 0.37. These results demonstrate that supervisors' and subordinates' view of the same LMX relationship do not often converge and

Table 4
Summary of the measurement methods used for LMX and affect research at different levels in top-tier empirical papers from 2000 onwards.

Measurement Method/s for LMX and affect-related constructs							
Level of analysis	LMX	N	%	Affective construct	N	%	Total papers
Within-person	Self-report (follower)	4	100%	Self-report (follower)	4	100%	4
	Between persons	33	92%	Self-report (follower)	29	81%	
Interpersonal	Self-report (leader)	3	8%	Self-report (leader)	4	11%	36
				Observer-report (supervisor rating follower)	1	3%	
				Observer-report (follower rating supervisor)	5	14%	
				Objective observer rating follower	1	3%	
				Self-report (follower)	4	57%	
Team	Self-report (followers: differentiation)	2	67%	Self-report (follower & leader)	1	14%	7
	Self-report (leader)	1	33%	Self-report (followers: aggregated)	1	33%	
				Self-report (leader)	1	33%	
Organizational	–	–	–	Self-report (follower & leader)	1	33%	3
				–	–	–	
				Self-report (follower)	3	60%	
				Self-report (followers: differentiation)	1	20%	
Multilevel	Self-report (leader)	1	20%	Self-report (follower & leader)	2	40%	5

Table 5
Comparison of measurement of follower-centric and leader-centric major LMX scales and major affect-related constructs in top-tier journals from 2000 onwards.

LMX scale	Information	Rating perspective	Within-person	Between persons	Interpersonal	Team	Multilevel	Total
LMX-7	Unidimensional, items pertain to respect, trust, obligation (Graen & Uhl-Bien, 1995)	Follower-rated	4	14	4	–	1	23
		Leader-rated (mirrored)	–	3	–	–	1	4
LMX-MDM	Multidimensional with four dimensions: affect, loyalty, contribution, professional respect (Liden & Maslyn, 1998)	Follower-rated	–	5	2	1	1	9
		Leader-rated (mirrored)	–	–	2	–	–	2
Affective scale	Information		Within-person	Between persons	Interpersonal	Team	Multilevel	Total
PA/NA	Measure of global positive affect and negative affect, either state or trait (Watson, Clark, & Tellegen, 1988); Job-related affective wellbeing (Van Katwyk, Fox, Spector, & Kelloway, 2000)	Follower self-rated	3	8	2	–	–	13
		Follower rating leader	–	1	–	–	–	1
		Leader self-rated	–	2	1	1	–	4
EI	Measure of the emotional intelligence of individuals (Schutte et al., 1998; Wong & Law, 2002)	Follower self-rated	–	4	1	–	1	6
		Leader self-rated	–	1	–	–	1	2
		Leader rating follower	–	1	–	–	–	1
Emotion regulation/management	Measures of the emotion regulation and emotion management behaviors of followers and leaders (Grandey, 2003; Gross & John, 2003)	Follower self-rated	–	4	–	–	–	4
		Follower rating leader	–	3	–	–	–	3
		Leader self-rated	–	1	–	–	–	1
Affective climate	Measures the affective climate at higher levels via aggregation (Choi, Price, & Vinokur, 2003)	Follower-rated & aggregated	–	–	–	–	1	1

they perceive the relationship from a different perspective.

Data dependence

The second challenge is that the LMX and affect literature we reviewed often appears to have neglected the potential bias of data dependence that arises because a supervisor develops relationships with multiple subordinates in a workgroup. Thus, each dyadic relationship (between a supervisor and a subordinate) may not be independent of other interconnected dyadic LMX relationships (see Gooty & Yammarino, 2011; Krasikova & LeBreton, 2012; Tse et al., 2013; Tse & Ashkanasy, 2015). In particular, each supervisor is often asked to rate her or his own affective experience and emotional intelligence and/or emotional labor tactics used in her or his LMX relationships (with each of the subordinates in the same workgroup). This will yield a strong data dependence effect likely to inflate hypothesized relationships between any dyadic variables (Kenny et al., 2006). It seems, therefore, that it is important to employ dyadic reciprocal design and analytical techniques to study any LMX-affect phenomena, especially those that involve an interpersonal relationship developed and maintained by a dyadic relationship involving both the supervisor and her his subordinate (Gooty & Yammarino, 2011; Krasikova & LeBreton, 2012).

Measurement and construct validity

The third challenge we identify is related to construct validity across multiple levels of analysis. LMX and affect-related constructs originate at the between persons or interpersonal levels, but such constructs are really conceptualized at a higher (i.e., team or organizational) or lower level (within-person) of analysis. For instance, between persons LMX has been conceptualized as a team-level construct (e.g., aggregation via mean or median score of LMX, variance in LMX, a minimum, or a maximum; see Chan, 1998; Kozlowski & Klein, 2000). Similarly, affective experiences at the between persons level can be conceptualized as momentary emotions that can fluctuate over time at the within-person level (Fisher & To, 2012; To, Fisher, Ashkanasy, & Rowe, 2012).

It is therefore important to emphasize the importance of aligning measures of LMX and affect-related constructs with the intended level of analysis. This is because the conceptual meaning and functional properties of such constructs are not often identical and can be changed at the higher or lower levels than were developed originally (Chan, 1998; Kozlowski & Klein, 2000). In this regard, Gooty and Yammarino (2011) propose two guiding questions to determine the nature of construct measurement at different levels: (1) Does a lower-level characteristic become a whole or unit-level characteristic at the higher level? (2) How can a higher-level unit characteristic emerge from the

lower-level parts?

In examining whether LMX and affect-related constructs have been measured at an appropriate level of analysis, it is clear (from Table 5) that various scales (e.g., the LMX-7 and LMX-MDM) have been used to measure LMX at different levels. For example, four of the studies we found used the LMX-7 scale at the within-person level, seventeen used the scale at the between persons level, four employed the scale to measure LMX at the interpersonal level, and only two used the same scale at multiple levels of analysis. Notably, we did not locate any studies of affect that utilized the leader–member social exchange scale (LMSX) (Bernerth, Armenakis, Feild, Giles, & Walker, 2007) in this review. With respect to affect, we also found a similar pattern for the other LMX scales and the measures of affect (e.g., the PANAS) used in the research. For example, Chi, Chung, and Tsai (2011) used the PANAS scale to assess team-level affective climate by aggregating individuals' perceptions of their own positive and negative affect. We note, however that Choi et al. (2003) developed another team-level scale which specifically measures the characteristics of affective climate at higher levels via aggregation. This suggests that this affective climate scale might provide a better alignment with the team level of analysis.

Limitations and future research directions

Before turning toward important future research directions, it is important to acknowledge that we based our review only on articles published in the top peer-reviewed literature. We, therefore, did not include book chapters, conference proceedings, doctoral dissertations, or unpublished manuscripts in this review. As such, there might be a potential bias toward reporting significant relationships, trends and patterns and we caution readers in this regard. Despite this, we argue that the sample and coverage of the selected publications for our review is largely appropriate given our major goal is to review the most important and relevant literature studying the LMX-affect phenomena across multiple levels of analysis in the field of organizational behavior and organizational psychology.

Based on this analysis, we next identify six key themes and associated research questions to guide future research (see Table 6). Noting that LMX and affect-related constructs are relationship-based and nested in interpersonal processes and functional systems at different levels in an organization, we segue to emerging areas for future research using the multilevel perspective, which focuses on within-person, between persons, interpersonal, team and organizational levels of conceptualization in organizations (Ashkanasy, 2003; Ashkanasy & Humphrey, 2011; Connelly & Gooty, 2015; Yammarino et al., 2005). Our review article is thus distinguished from earlier reviews (e.g., Gooty et al., 2010; Paik, 2016; Schriesheim, Castro, & Coglisier, 1999; Yammarino et al., 2005) insofar as we deal with both LMX and affect. Thus we focus in particular on the intertwined nature and characteristics of both concepts by integrating and synthesizing the LMX and affect research (i.e., theoretically and empirically) across multiple levels of analysis (Ashkanasy, 2003; Tse et al., 2015; Yammarino et al., 2005).

These six key themes also span fifty specific research questions that we provide in Table 6. Presented within the five levels of analysis framework, these research questions are encapsulated within twelve sub-themes that we argue warrant greater attention in future.

Dynamic temporal approaches

Organizational behavior scholars today are coming to recognize the value of capturing work dynamics. This is reflected in calls for special editions launched on the topic by leading journals (e.g., Journal of Organizational Behavior, 2018 by Hofmans, Judge, Roe, & Vantillborgh). Our review reveals a deficiency (especially empirical) in research regarding the dynamic nature of the affect-LMX nexus and how it develops and changes momentarily during daily

interactions over a short period of time, or in response to significant interpersonal and team or organizational events. This is noteworthy, especially given the influential article by Graen and Uhl-Bien (1995) on LMX that highlighted the multilevel embeddedness of the leader-follower relationship and the life-cycle of LMX development. It seems that, despite the clear understanding of the dynamic nature of LMX operating within a multilevel environment – identified more than two decades ago – it has not yet been fully leveraged in research.

Our review shows that most LMX research measures the dyadic exchange quality in a static and absolute manner, rather than in dynamic and relative terms (cf. Day & Miscenko, 2015; Lord et al., 2017). In short, LMX research has typically not fully investigated the longitudinal and relational effects of LMX. This severely limits our understanding of the duration, the stability or dynamics, the sequence of occurrence, and the rate of change of followers' affect, attitudes, and behavior in the context of the evolving LMX relationship. By switching to a temporal and process-oriented approach, researchers should be able to understand better what happens, how things happen, and why things happen in the context of LMX-affect research.

Organizational-level moderators

Our review also revealed a dearth of research looking at organizational-level factors that influence the relationships between LMX and affect-related constructs. We were unable to locate any empirical studies at this level. We propose that this level of analysis presents fertile ground for researchers to examine such phenomenon, especially the role of organizational display rules, the impact of change events that are inherently affective, and the influence of specific HRM interventions and processes on LMX and affect-related constructs. Of course, the acid test for researchers is to implement longitudinal research designs (with all their inherent methodological and analytical challenges) that not only capture significant organizational events but also enable the study of top-down effects that cascade from the organizational level to the within-person level. Associated with this concept, there is clearly a need to study of macro processes that connect the organizational-level factors to within-person level outcomes (Fisher & To, 2012; Tse et al., 2015).

Objective measures of affect-related constructs

Despite advances in the use of objective measures in affect research, (e.g., neurophysiological measures, hormones, brain imaging), none of this seems to have been translated to the research linking LMX and affect. There would therefore seem to be potential in LMX research to investigate the impact on (or influence from) emotional regulation strategies and discrete affective experiences as they happen in real time using these more advanced objective measures. Furthermore, ability measures (such as the MSCEIT used to measure ability emotional intelligence, see Daus & Ashkanasy, 2005) could be employed to study LMX and affect in future research.

Specific (not global) aspects of LMX and affect

We found that most of the studies examined global measures of affect (e.g., PA or NA or EI) and of LMX (as a total score). Yet, we also located a small group of studies where authors chose to investigate sub-dimensions of LMX (Newcombe & Ashkanasy, 2002); or EI (Huang et al., 2010); ER (Little et al., 2016); or discrete affect (Tse et al., 2013). The findings from these studies would seem to demonstrate that using the global scales may overlook some of the more nuanced relationships between LMX and affect-related constructs – that are not always in the direction expected.

In this regard, Lindebaum and Jordan (2014) argue that some affect research shows that sometimes positive affect yields negative consequences and negative affect produces good outcomes. For example,

Table 6
Suggestions for future research.

Level of analysis	Research questions and imperatives
Within-person	<p>Momentary affective variation</p> <ol style="list-style-type: none"> 1. How does the momentary fluctuation of followers' affect influence followers' LMX perception? 2. How does the momentary fluctuation of leaders' affect influence leaders' LMX perception? 3. Which specific momentary positive affective states (e.g., excitement, pride, content, and enthusiasm) play a role in daily LMX development across time? 4. Which specific momentary negative affective states (e.g., upset, worry, fear and disappointment) play a role in daily LMX development across time? 5. Does high-arousal positive affect influence daily LMX relationships more than low-arousal positive affect across time? 6. Does high-arousal negative affect influence daily LMX more than low-arousal negative affect across time?
Between persons	<p>Relative variance accounted for by individual differences</p> <ol style="list-style-type: none"> 7. How does emotional intelligence influence the stages of LMX development? 8. How does emotional labor affect the stages of LMX development? 9. How do emotional intelligence and emotional labor interact to predict LMX development? 10. How does emotional intelligence interact with personality traits (e.g., big-five personality) to influence LMX? 11. How does emotional labor interact with personality traits (e.g., big-five personality) to influence LMX? <p>The role of affective states in LMX development</p> <ol style="list-style-type: none"> 12. How do discrete forms of positive affect (e.g., excitement, pride, content, or enthusiasm) influence LMX? 13. How do discrete forms of negative affect (e.g., upset, worry, fear or disappointment) influence LMX? 14. Does high-arousal positive affect have a stronger positive impact on LMX than low-arousal positive affect? 15. Does high-arousal negative affect have a stronger negative impact on LMX than low-arousal negative affect? 16. How does the experience of asymmetric positive and negative affect (e.g., nervousness and excitement) predict interpersonal interactions of supervisors and subordinates?
Interpersonal	<p>Actor-partner independence model (APIM)</p> <ol style="list-style-type: none"> 17. Do the supervisor-subordinate dyad member's personal characteristics (e.g., positive/negative affectivity) influence his/her perception of LMX, and the other member's perception of the same LMX? 18. Do the supervisor-subordinate dyad members' personal characteristics (e.g., emotional intelligence) influence their ratings of LMX to an equal degree? 19. Do dyad supervisor-subordinate members' characteristics interact in affecting their ratings of an LMX relationship/interaction? <p>One-to-many model (OWM)</p> <ol style="list-style-type: none"> 20. What are the sources of variability (e.g., supervisor affect, subordinate affect) in dyad members' ratings of their LMX? 21. What characteristics of a leader and his or her subordinate (e.g., affective experience) influence the leader's perception of LMX with other subordinates, and also the other subordinates' ratings of their LMX with their leader? 22. What are the factors (e.g., leader's affect) that interact with the subordinate's role in impacting the focal person's ratings of LMX? <p>Social relations model (SRM)</p> <ol style="list-style-type: none"> 23. How do differential LMX relationships influence each subordinate's affective reactions to other coworkers in different dyads? 24. To what extent does the similarity of LMX experienced by two subordinates influence their positive affect toward each other in a dyad? <p>To what extent does the dissimilarity of LMX experienced by two subordinates influence their negative affect toward each other in a dyad?</p>
Team	<p>Team processes of LMX</p> <ol style="list-style-type: none"> 25. How can affective climate emerge from a set of different LMX relationships that members have formed with the leader in a workgroup? 26. How do social exchange processes shape shared perceptions or collective cognitions of affective activities and their relationships within the workgroup? 27. Is it possible for a highly respected and influential member, who is not a high-LMX member, to spread positive or negative affect more easily and quickly than another high-LMX member in a workgroup? 28. How does team-level emotional intelligence interact with LMX differentiation to influence LMX development? <p>Team-level measurement</p> <ol style="list-style-type: none"> 29. How does team-level emotional intelligence form and emerge from members with different LMX relationships in a workgroup? <p>How does team-level emotional regulation form and emerge from members with different LMX relationships in a workgroup?</p>
Organizational	<p>Organizational affective influences on the development of LMX</p> <ol style="list-style-type: none"> 30. How do social exchange processes and networks shape organizational affective climate? 31. How do organizational emotional display rules influence LMX networks? <p>Organizational practices and events</p> <ol style="list-style-type: none"> 32. How do particular HRM practices within organizations influence the relationship between organization-level affect and LMX networks? 33. How do significant organizational change events (e.g., CEO succession, major innovation, restructuring) influence the relationship between organizational-level affect and LMX networks? <p>Organization-level measurement</p> <ol style="list-style-type: none"> 34. How does organization-level affective climate form and emerge from members with different LMX quality? <p>How is the complexity of LMX networks in organizations best captured?</p>
Multilevel	<p>Team – organization level issues</p> <ol style="list-style-type: none"> 35. How can teams harness their emotional attributes to pursue performance and innovation within their wider organizational environment and what is the role of organizational-level LMX networks in this process? 36. What factors influence the team-organization interface most – for example, organizational structure, culture, procedures, rules and regulations? <p>Organization – team level issues</p> <ol style="list-style-type: none"> 37. How do organizational-level processes and practices (e.g., HRM practices; change management) impact affect and LMX relationships at the team-level? 38. How do organizational-level factors, such as affective climate or emotional display rules, influence team-level LMX and subsequent performance outcomes? 39. To what degree, and in what ways, do teams affectively respond (e.g., emotional tone; affective commitment) to organizational change imposed from above and what is the role of team-level LMX?

(continued on next page)

Table 6 (continued)

Level of analysis	Research questions and imperatives
	40. How do organizational LMX networks impact team affective climate? Between persons – team level issues
	41. In what ways do individuals' affect-related traits, skills and behaviors interact with team-level LMX to have subsequent team-level outcomes? 42. Which affect-related processes and tactics best support performance by individuals in the context of team-level LMX? Team – between persons level issues
	43. To what degree can LMX processes within teams be managed to reduce emotional exhaustion? 44. What are the psychological health (affect-laden) impacts upon the individuals in teams with extreme forms of LMX, or changing leaders? 45. Exclusion and social isolation effects: to what extent is an individual at risk or buffered by their affective traits when opposing team-level performance or change attempts (for different levels of team-level LMX)? Interpersonal – between persons – within-person level issues
	46. To what extent do shared perceptions of the LMX relationship (by leader and follower) vary with the day-to-day affective events experiences of the individual (leader or follower) across time? What are the between persons level effects of a shared affective event, common to the whole team (e.g., restructure, emergency at work) and how does interpersonal-level LMX explain this relationship?

Elfenbein et al. (2007) and Elfenbein and Ambady (2002) found that some emotional intelligence abilities (e.g., emotional recognition) can be counterproductive if too developed. This might translate to the LMX relationship as well, insofar as followers who are more aware and in tune with their leaders' negative moods might end up more adversely affected by them, potentially harming their LMX quality; a link which may be hidden when using global measures.

Finally, it is important to comment on the importance of context. For example, while emotional regulation and LMX might be negatively related for particular strategies such as surface acting (Glasø & Einarsen, 2008), there is evidence to suggest mixed effects for deep acting (e.g., in the case of deep acting by leaders; Fisk & Friesen, 2012) and largely positive LMX outcome effects for natural and genuine forms of emotional labor (Humphrey, Ashforth, & Diefendorff, 2015).

Misspecification across theory, measurement, and analysis

As we noted earlier, this is a common problem in multilevel research (see Gooty et al., 2012; Schriesheim et al., 1999) and has the potential to become problematic in future. This is especially because LMX is now recognized as operating in multiple levels of an organization (Henderson et al., 2009). In this regard, Gooty et al. (2012) recommended three best practices: (1) Specify the LMX and affect-related constructs, define them clearly, and discuss their level of origin and the higher levels at which they manifest. (2) Specify the level of measurement of such constructs, this needs to be clearly clarified via the articulation of bottom-up emergence processes, and the specification of compilation or composition models of aggregation; also provide empirical justification for the validity of the higher-level measures (e.g., LMX differentiation, team mean of LMX, affective climate and team-level EI) that emerged from the lower-level of LMX and affect-related constructs. (3) Employ appropriate data analytical techniques that can be employed to analyze hypothesized relationships specified in the multilevel models (that involves both higher level and lower level of LMX and affect-related constructs).

Conclusions

Our objective in this review article was to present a comprehensive and systematic review of the literature of LMX and affect in the workplace (that has burgeoned since the beginning of the Second Millennium). The body of research we covered, as well as the exponential growth we observed led us to adopt Ashkanasy's (2003) five levels-of-analysis framework as an organizing heuristic. As we progressed with this literature review, we noticed that the field has continued to make steps forward especially since 2000, but some

fundamental challenges are noticeable that have resulted in a confusing diversity of theoretical and methodological approaches. Rectifying these challenges has the potential to advance our understanding of complex LMX and affect phenomena. We have thus sought to provide a detailed summary of this literature since 2000. We are also hopeful that this review will provide a strong foundation and set of research ideas for developing our understanding of the role played by affect in LMX theory in the years to come.

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