

LMX COMPARISONS BETWEEN PEERS:
A RELATIONAL APPROACH TO STUDYING LMX DIFFERENCES AND
INTERPERSONAL BEHAVIORS

By

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ABSTRACT

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To date, a disproportionate amount of research examining the importance of leader-member work relationships has focused on the outcomes for individual employees. However, there has been criticism regarding the myopic focus on the leader-member dyad and failing to consider the broader implications on system of social relationships each LMX relationships is embedded within. This has led to an emerging literature focused on understanding the effects of differences in LMX relationships. In this dissertation, I leverage power-approach theory to integrate psychological research on power with extant research on LMX and differences in LMX relationships. Specifically, I argue that that perceived differences in a focal employee's LMX quality to that of a referent coworker will influence his or her sense of psychological power. The extent that the focal employee and referent coworker are task interdependence will moderate this relationship. Subsequently, the effects of LMX differences will influence discretionary interpersonal work behaviors (mediated through psychological power). However, the form of discretionary behavior (i.e., citizenship vs. counterproductive) will be contingent upon the individual characteristics of the focal employee.

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INTRODUCTION

Work relationships are some of the most important interactions that shape our everyday organizational lives (Colbert, Bono, & Purvanova, 2016). From productivity and performance (e.g., Sparrowe, Liden, Wayne, & Kraimer, 2001; Uhl-Bien, Graen, & Scandura, 2000) to social support and career success (e.g., Chiaburu & Harrison, 2008; Seibert, Kraimer, & Liden, 2001), work relationships can promote both work-related goals and individual well-being. Indeed, the importance of work relationships are well recognized in organizational research (Ingram & Zou, 2008; Liden, Anand, & Vidyarthi, 2016) and “have come to form the very foundation of organizations and the contemporary embodiment of how most work gets accomplished” (Ferris et al., 2009, p. 1379). Within the work environment, an employee can form a variety of relationships, differentiated by source (e.g., leaders and coworkers) and nature (e.g., transactional and socio-emotional). One of the most influential and arguably most researched relationship in organizations is the leader-member relationship (i.e., the relationship quality between a supervisor and subordinate). The dominant perspective that has emerged to study this phenomenon over the past four decades is leader-member exchange (LMX; Graen & Uhl-Bien, 1995; Liden, Sparrowe, & Wayne, 1997).

Originally labeled as the vertical-dyad linkage (VDL; Dansereau, Graen, & Haga, 1975; Liden & Graen, 1980), the LMX approach to the study of leadership centers on understanding supervisor-subordinate relationships that are inherently unique across each relationship a leader has (Barling, Christie, & Hopton, 2011; Graen & Uhl-Bien, 1995). This differs from more traditional approaches to leadership, at this point in time, that implicitly assumed (a) there was a unidirectional flow of influence from leader to follower and (b) that a leader’s behavior and effectiveness were consistent across followers (Barling, et al., 2011; Schriesheim, Castro, &

Cogliser, 1999). To date, over 2,000 articles have been published on this topic (Bauer & Erdogan, 2015), leading to a rich literature that has convincingly demonstrated the benefits of a high-quality LMX relationship for an employee and their organization (e.g., Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007; Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016). However, scholars have increasingly noted that a disproportionate amount of LMX research focuses exclusively on the relationship one subordinate has with their supervisor and the effects that this relationship has on that specific subordinate's work outcomes (e.g., attitudes and behaviors) (Erdogan & Bauer, 2015).

Indeed, a pervasive criticism of LMX research to date is the myopic focus on the leader-member dyad in isolation, which ignores the surrounding work and social context that each of these relationships are embedded within (e.g., Anand, Hu, Liden, & Vidyarthi, 2011; Kauppila, 2016; Liden, et al., 1997). This has spurred an emerging number of studies that have sought to understand how differences in LMX relationships influences work outcomes (e.g., Erdogan & Bauer, 2010; Liden, Erdogan, Wayne, & Sparrowe, 2006). That is, an individual's LMX relationship is embedded within a broader social context, for instance a coworker's LMX relationship or an individual's own relationship with that coworker. The most common perspective that has emerged to study this phenomenon is *leader-member exchange differentiation* (LMX differentiation), defined as the variability in the quality of LMX relationships between members with the same leader (Erdogan & Bauer, 2010; Henderson, Liden, Glibkowski, & Chaudhry, 2009; Liden, et al., 2006).

However, in contrast to the seemingly ubiquitous benefits of high-quality LMX for employees, scholars have cautioned against viewing differentiation as unilaterally good or bad (Anand, Vidyarthi, & Park, 2015; Kauppila, 2016). This is evident in studies that have shown

LMX differentiation to have beneficial effects (e.g., Boies & Howell, 2006; Herdman, Yang, & Arthur, 2017), detrimental effects (e.g., Chen, He, & Weng, 2018; Cobb & Lau, 2015), as well as no-relationship (e.g., Sui, Wang, Kirkman, & Li, 2016) with a number of work outcomes. Despite the lack of generalizable conclusions regarding LMX differentiation (Anand, et al., 2015; Erdogan & Bauer, 2015), theory and research on leader-member exchange rely on a fundamental premise: a leader has limited resources – provided by the organization or individual resources – that can be allocated to his or her subordinates to accomplish tasks a leader is responsible for (Graen & Uhl-Bien, 1995; Liden & Graen, 1980; Liden, et al., 1997). As such, LMX theory and research has long held that effective leaders can make the best use of their limited resources by differentiating their LMX relationships, developing high-quality socio-emotional exchanges with some subordinates and low-quality transactional exchanges with others (Dienesch & Liden, 1986; Liden & Maslyn, 1998).

Although it is theoretically possible for a leader to form high-quality LMX relationships with all of their subordinates, past studies on leader-member exchange have shown that differentiation may be more of a norm than an exception, with over 90% of workgroups exhibiting differential patterns of LMX relationships (Graen & Cashman, 1975; Liden & Graen, 1980). Indeed, it is recognized that leaders can reliably differentiate the quality of their relationships between subordinates (Martin, Thomas, Legood, & Russo, 2018). Additionally, prior research has also established that differences in LMX quality are readily observable and salient to employees (Duchon, Green, & Taber, 1986; Sherony & Green, 2002; Sias & Jablin, 1995; Tse, Lam, Lawrence, & Huang, 2013). Furthermore, LMX differentiation has been found to influence activity within a workgroup in both positive and negative ways (Henderson, et al.,

2009; Yu, Matta, & Cornfield, 2018). However, the extant literature has generally taken one of two perspectives in approaching LMX differentiation research.

First, some studies have taken the perspective that LMX differentiation is a characteristics of the workgroup (e.g., Cheng & Li, 2012; Zhao, 2015), thereby making an assumption that all group members perceive, interpret, and react to differences in LMX relationships similarly. Second, other studies have approach differentiation by considering an employee's relative standing in comparison to other coworkers (e.g., Harris, Li, & Kirkman, 2014; Hooper & Martin, 2007). Although this perspective avoids the questionable assumption that LMX differentiation influences all group members in the same manner, it also makes a separate and equally concerning assumption that how a focal employee perceives, interprets, and reacts to differences in LMX relationships is consistent across all of a focal employee's work relationships with other coworkers.

Both of these approaches have contributed to the emerging literature focusing on extending LMX theory and research beyond a single leader-member relationship, however the critical issue that cannot be addressed through existing approaches is how differences in LMX relationships influences an employee's interactions with each individual coworker. This is especially important for coworkers that work interdependently in workgroups because the success of a work unit is reliant on effective team processes (LePine, Piccolo, Jackson, Mathieu, & Saul, 2008; Marks, Mathieu, & Zaccaro, 2001; Mathieu, Hollenbeck, van Knippenberg, & Ilgen, 2017). Moreover, differences the unique LMX quality that leaders form with each subordinate are both salient and observable to employees, serving as social information that informs subordinates of their relative standing with the leader and within their own workgroup (Sherony & Green, 2002; Tse, et al., 2013). Indeed, scholars have suggested that individual's

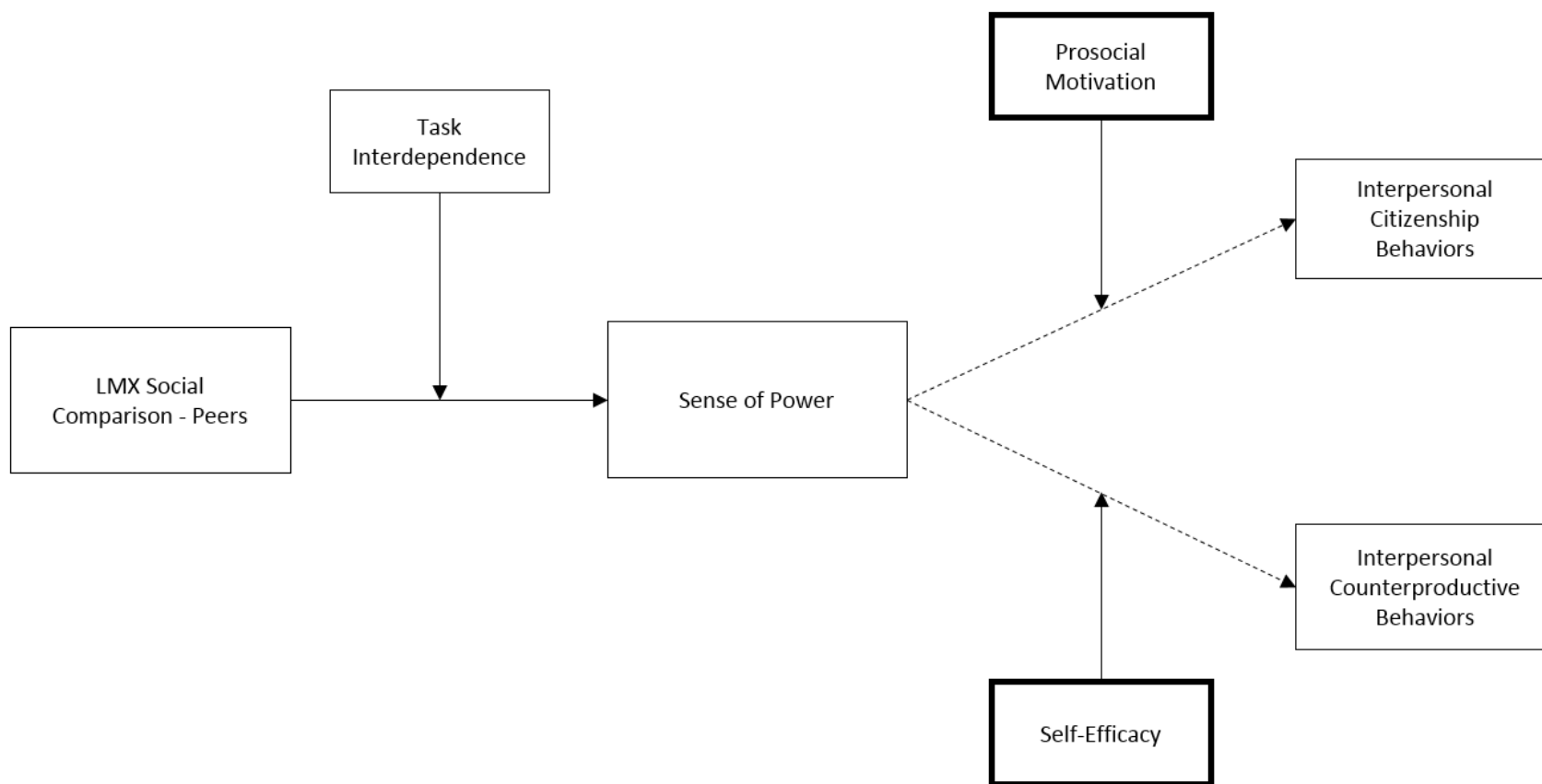
may (a) selectively perceive social information based on their own needs and prior experiences (Salancik & Pfeffer, 1978; Weick, 1977); (b) interpret differences in how they are treated in ways that are congruent with their own self-views (Swann, 1983); or (c) attend to social information that maintains a positive self-view (Ferris & Sedikides, 2018). From these perceptions, employees should react to LMX differences in distinct ways, based on their own interpretation of their LMX standing relative to each coworker. These behavioral reactions importantly determine the extent that coworkers will form shared perceptions and develop effective interpersonal processes.

Therefore, the purpose of this dissertation is to extend our understanding of how LMX relationships and differences in LMX relationships by addressing the limitations in the current literature. Specifically, I aim to uncover how perceptions of LMX differences influences a focal employee's discretionary interpersonal behaviors towards each referent coworker. To do so, I adopt a relational approach to integrate theory and research on the psychological experience of power to inform my predictions in this dissertation. Due to the distinct relationships an employee establishes and maintains with each coworker, I argue that differences in LMX standing serve as a signal from the leader regarding each employee's relative standing within the work unit. In turn, employees with a higher LMX than a referent coworker will experience an elevated sense of psychological power, whereas employees with a lower LMX than a referent coworker will experience a reduced sense of psychological power. This relationship will be attenuated when employees are more interdependent in their work. Subsequently, a focal employee's sense of power in his or her work relationship with another coworker will predict his or her discretionary interpersonal behaviors towards the referent coworker. The type of discretionary behavior

(interpersonal citizenship or counterproductive behaviors) is contingent upon the extent that a focal employee is prosocially motivated and his or her work-based efficacy.

In the following sections, I will review the origins and general conclusions from existing LMX research, followed by a heavy emphasis on the various theoretical perspectives and empirical approaches that have contributed to our current understanding of LMX differentiation. Next, I integrate power-approach theory and research on the psychological experience of power to inform the predictions in my proposed model together (see Figure 1). This is followed by the development of the formal hypotheses in this dissertation. Finally, I discuss my proposed methods for testing these predictions.

Figure 1 – Proposed Conceptual Model



Notes. Bolded boxes represent constructs at the individual-level (level-2).

LITERATURE REVIEW: LEADER-MEMBER EXCHANGE

Motivation for an LMX Approach to Leadership

Early behavioral theories of leadership attempted to uncover if leadership styles and behaviors were universally effective (Barling, et al., 2011). In other words, researchers sought to find the best “average leadership style” (ALS) that will maximize a workgroup’s contribution to the organization. However, as noted by Dansereau, Cashman, and Graen (1973) this perspective made two assumptions about leadership: (a) a leader’s behaviors towards all subordinates and (b) all subordinates’ perceptions, interpretations, and reactions to a leader’s behaviors are both homogeneous and consistent over time. As such, an “average style of leadership” that generalized across interactions with all subordinates could be captured and differences in subordinate reports of leadership are assumed to be empirical errors that are minimized through averaging member reports (Graen, Dansereau, & Minami, 1972).

Proposing an alternative perspective to studying leadership, Dansereau, et al. (1975) developed LMX theory (originally termed the “Vertical Dyad Linkage” approach) that challenged the previously held assumptions from an ALS perspective. Developed as the first dyadic theory of leadership (Liden & Graen, 1980), the key distinguishing feature of an LMX approach to the study of leadership is the focus on the mutual influences that are characteristic of leader-member interactions (Erdogan & Liden, 2002; Graen & Uhl-Bien, 1995; Liden, et al., 1997), opposed to studying the ‘Average Leadership Style’ (ALS) that leaders generally exhibited across all subordinate relationships (Barling, et al., 2011; Graen & Uhl-Bien, 1995; House & Aditya, 1997). Most importantly, an LMX approach allows for leader-member relationships to vary across subordinates and does not make the strict assumption that differences

in LMX reports are simply error, but instead are meaningful differences (Dansereau, et al., 1973).

Theoretical Underpinnings of LMX Theory and Research

Role Theory. The original conceptual foundations of LMX research are based in role theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Katz & Kahn, 1978), which posits that individuals behave in ways that are different but predictable based upon their social identities and the context that they interact in (Biddle, 1986). From this perspective, role theory views organizations as a system of roles that work is structured around and coordinated through (Katz & Kahn, 1978). Using role theory as a theoretical foundation, Graen (1976) put forth a model of role development that suggested organizational roles are not determined by formal job descriptions. Instead of viewing roles as a rigid set of formally prescribed behaviors that individuals need to fulfill, the LMX approach views organizational roles as less rigid and more malleable because leaders have the authority to negotiate work roles through a set of informal exchanges that occur when new members enter an organization (Liden, et al., 1997).

Expanding upon Graen's (1976) original model, Graen and Scandura (1987) elucidated the LMX developmental process, describing the process of how role taking, role making, and role routinization emerge through dyadic interactions between a leader and subordinate. The role taking phase involves the leader making a request or assigning a task to a subordinate, and the subordinate's reactions provides feedback to the leader about that particular subordinate. This is followed by the role making phase, where leader-member exchange relationships becomes defined through a series of mutual exchanges. Finally, the role routinization phase occurs when a leader and member develop clear mutual expectations in their work relationship. As a result of this process, the dyadic relationship a leader forms with each subordinate is inherently unique.

Indeed, early studies on LMX have shown that most workgroups exhibit differential patterns of LMX relationships (Graen & Cashman, 1975; Liden & Graen, 1980).

As theory and research on the development of LMX accumulated, scholars began turning to social exchange theory to explain how LMX relationships importantly influence work outcomes. This was a natural extension of LMX theory and research, as the interpersonal relationship that evolves between a leader and subordinate is based upon social exchanges (Graen & Cashman, 1975; Liden, et al., 1997), where “each party must offer something the other party sees as valuable” (Graen & Scandura, 1987, p. 182).

Social Exchange Theory. The concept of social exchange spans a wide range of disciplines, including anthropology, social psychology, and sociology (Cropanzano & Mitchell, 2005). Social exchange theorists generally agree that social exchanges involve a series of interdependent interactions that generate reciprocal obligations between two parties (Blau, 1964; Emerson, 1976). Importantly, exchanges between two parties are not limited to only a transactional or “economic” element. *Economic exchanges* rests on a formal contract principle, such that the terms of the transaction between two parties are made in a *quid pro quo* fashion or clearly specified at a future agreed upon time. In contrast, *social exchanges* rests on the expectations of future reciprocity and entails unspecified obligations that are not stipulated in advance (Blau, 1964).

A fundamental principle of social exchange relationships, and arguably the most evoked principle in social exchange theory, is the *norm of reciprocity* (Blau, 1964; Cropanzano & Mitchell, 2005; Emerson, 1976). This principle suggests that an individual who gives resources to another obligates the receiver to return the action (Gouldner, 1960). To discharge the obligation, the receiver must, in turn, furnish resources to the giver. Only after the original giver

has been satisfied will the receiver be relieved of their sense of indebtedness. As such, social exchanges entails trusting others to discharge their obligations, whereas economic exchanges do not (Cropanzano & Mitchell, 2005; Emerson, 1976). Extending social exchange theory, Foa and Foa (1974, 1980) articulated the six categories of resources that are exchanged between two parties, including affiliation, status, information, money, goods, and services. These different types of resources are often collapse into two categories, economic and socioemotional resources, within social exchange theory.

Building upon these distinctions, organizational researchers have generally viewed social exchanges as a mutual giving and taking process that occurs between two parties, such as individuals, workgroups, or organizations. Over time, social exchange principles have also been expanded to explain more generalized forms of social exchange (Bearman, 1997; Molm, Collett, & Schaefer, 2007; Takahashi, 2000) as well as affect in work relationships (Cropanzano, Dasborough, & Weiss, 2017; Lawler, 2001). As an aggregate, social exchange theories have served as a useful framework for understanding how work relationships can lead to beneficial and detrimental outcomes in organizations (Cropanzano, Anthony, Daniels, & Hall, 2017; Cropanzano & Mitchell, 2005; Erdogan & Liden, 2002). This includes, but is not limited to, the relationships between individuals and their organizations, individuals and their coworkers, and individuals and their supervisors (Cropanzano, Anthony, et al., 2017; Lavelle, Rupp, & Brockner, 2007). Indeed, the advances in social exchange theory over the past several decades have provided a powerful explanatory mechanism for explaining a wide range of organizational phenomena that occur through the interactions that occur within work relationships. Taken together, it is clear that social exchange theory has substantially influenced organizational research over the past several decades.

LMX Relationships as Social Exchanges. From the perspective of social exchange theory, leader-member interactions can be viewed as an ongoing relationship that involves give and take between a leader and subordinate aimed primarily at attaining mutually beneficial goals (Liden, et al., 1997; Wilson, Sin, & Conlon, 2010). For example, leaders can provide members with pay raises and information related to work tasks, as well as socioemotional support and personal favors. Subordinates can reciprocate with task-related behaviors, such as work effort, performance, information from outside sources (e.g., peers), and citizenship behaviors to fellow group members, as well as loyalty, respect, and commitment to the leader (Liden & Maslyn, 1998; Wilson, et al., 2010). Most importantly, social exchange theory provides the conceptual rationale regarding *why* leaders and subordinates initiate and maintain work relationships.

When describing leader-member relationships as the exchange of tangible and non-tangible resources between supervisors and subordinates, LMX implicitly recognizes that there are differences between the relationships that leaders have with subordinates (Bernerth, Armenakis, Feild, Giles, & Walker, 2007; Liden, et al., 1997). The realities of a work environment creates constraints that forces leaders to make decisions about how to allocate resources and support among their subordinates effectively (Wayne & Ferris, 1990), leading to only a few individuals receiving resources that go above and beyond their formal employment contracts (Graen & Uhl-Bien, 1995; Liden & Graen, 1980). Indeed, research has demonstrated that workgroups are heterogeneous in terms of the relationship quality between a leader and group members (Duchon, et al., 1986; Graen & Cashman, 1975; Liden, et al., 2006; Liden & Graen, 1980). Thus, a core premise of LMX theory is that effective leaders differentiate their exchange relationships to allocate their limited resources (e.g., time, energy) in the most efficient manner towards achieving organizational goals.

Leaders, for example, contribute resources and benefits to employees. This can include developmental and career progression opportunities, such as promotions, challenging work assignments, coaching and mentoring, job autonomy, and participation in decision-making (Liden & Graen, 1980; Scandura, Graen, & Novak, 1986; Wakabayashi & Graen, 1984). In return, subordinates provide leaders with engagement and effort, reflected by higher degrees of job involvement, greater responsibility, and ownership for challenging task assignments (Graen, Novak, & Sommerkamp, 1982; Graen & Scandura, 1987; Liden & Graen, 1980). The subordinates that receive a disproportionate amount of resources from their leaders (relative to their coworkers) are viewed as having a high-quality LMX relationship, often referred to as ‘trusted assistants’ (Dansereau, et al., 1975; Graen & Uhl-Bien, 1995), and are subjected to particularly strong internal forces that compel them to repay their supervisor (Sekiguchi, Burton, & Sablinski, 2008). More specifically, high-quality LMX relationships are characterized by mutual trust and respect, typically affording the subordinate with more resources than other coworkers supervised by the same leader (Graen & Scandura, 1987; Scandura, et al., 1986). In contrast, subordinates who receive only the minimum resources, as defined by their employment contracts, are typically viewed as ‘hired hands’ (Dansereau, et al., 1975; Graen & Uhl-Bien, 1995) and have little sense of obligation to expend their own resources to satisfy their direct supervisors beyond that of their formal role requirements (Graen & Uhl-Bien, 1995).

LMX and Work Outcomes

To date, over 2,000 articles have been published on the topic of leader-member exchange (Bauer & Erdogan, 2015). The accumulated body of research on LMX and work outcomes have consistently demonstrated the benefits of having a high-quality LMX relationship with one’s leader. For example, LMX studies based in role theory have shown that LMX is negatively

associated with role ambiguity and role conflict (Dulebohn, et al., 2012; Gerstner & Day, 1997). In addition, studies have shown that LMX is positively associated with job attitudes, such as organizational commitment, job satisfaction, and turnover intentions (Gerstner & Day, 1997; Janssen & Van Yperen, 2004). Furthermore, researchers have found that LMX is positively related to both in-role and extra-role behaviors (Deluga, 1994; Ilies, et al., 2007; Martin, et al., 2016). Finally, LMX also contributes towards attitudinal outcomes, such as procedural justice and psychological empowerment (Dulebohn, et al., 2012; Masterson, Lewis, Goldman, & Taylor, 2000).

Taken together, the general conclusion drawn from the overwhelming number of studies that have been devoted to the topic of LMX over the past several decades suggest that high-quality LMX relationships are beneficial for employees and their organizations. However, LMX theory and research is not without criticism.

Criticisms of LMX Research

Despite the voluminous body of research on the antecedents and outcomes associated with leader-member exchange to date (Dulebohn, et al., 2012; Gerstner & Day, 1997; Ilies, et al., 2007; Martin, et al., 2016), investigations of this phenomenon has been largely focused on how the dyadic LMX relationship between a leader and a subordinate is related to that particular subordinate's work outcomes. This may have been, in part, due to the original approach to the study of LMX, where Graen and Cashman (1975, p.150) stated that "the appropriate level of analysis is not the work group ... but the vertical dyad." The myopic focus on the leader-member dyad, however, has contributed to the enduring criticism that LMX research neglects the broader system of social relationships that exists in the work environment (Cogliser & Schriesheim, 2000; Liden, et al., 1997; Schriesheim, Castro, Zhou, & Yammarino, 2001; Sparrowe & Liden,

1997). Indeed, the important influence that the work context can have on outcomes is well recognized in organizational research (Dierdorff, Rubin, & Morgeson, 2009; Johns, 2006; Mowday & Sutton, 1993). For instance, George and Jones (1997) noted that the work context can be viewed as “environmental forces or organizational characteristics at a higher level of analysis that affect a focal behavior in question” (p. 156) and Johns (2006) suggested that the workplace context can be thought of as “situational opportunities and constraints that affect the occurrence and meaning of organizational behavior” (p. 387).

As a response to these criticisms, LMX researchers have been refocusing their attention towards examining how differences in LMX quality between coworkers with the same supervisor are related to individual and group outcomes. For leaders, differentiating their exchange quality between subordinates allows them to find the best fit between a members’ abilities and their task assignments (Dansereau, et al., 1975). This allows leaders to allocate their limited resources in line with each member’s abilities, skills, and contributions (Maslyn & Uhl-Bien, 2005). This line of inquiry acknowledges that leaders, more often than not, will form differential relationships with subordinates. Moreover, each LMX relationship is embedded within the broader context of other work relationships. Indeed, scholars have argued that leaders reliably differentiate their LMX relationships between subordinates, and that these differences are both salient and observable to subordinates (e.g., Duchon, et al., 1986; Sherony & Green, 2002; Sias & Jablin, 1995; Tse, et al., 2013). It follows that if leaders form differential relationships with subordinates, then the relationship between LMX and work outcomes may not be only based on the quality of the relationship a leader has with a specific subordinate, but also that of other members within the work unit (Martin, et al., 2018). Therefore, *how* individuals

perceive, interpret, and react to difference in LMX relationships remains a vital research question that has both theoretical and practical implications for work outcomes.

LITERATURE REVIEW: EXTENDING THE STUDY OF LEADER-MEMBER EXCHANGE BEYOND THE LEADER-MEMBER DYAD

Early Evidence of Differences in LMX Quality

As discussed previously, early studies on LMX have convincingly demonstrated the existence of differential work relationships between a leader and subordinates. Empirical studies have shown that over 90% of work units contain members from multiple exchange groups (note that the literature at this time categorized individuals into either in-groups or out-groups based upon their LMX relationships; Graen & Cashman, 1975; Liden & Graen, 1980). This suggests that LMX differentiation is more of a norm than an exception in organizations.

Building upon these ideas, Graen, Liden, and Hoel (1982) found evidence that group members with higher LMX quality than their coworkers were less likely to turnover. Ferris (1985) replicated these findings in an independent study. Together, these two early studies extended the idea that it is important for researchers to not only consider the LMX dyad, but also the differences in LMX relationships within a work unit. In addition, Duchon, et al. (1986) found evidence that the exchange process between leaders and members are readily observable, as their results clearly demonstrated that group members are treated differently by leaders. It should be noted that, at this point in time, LMX scholars were focused on establishing the existence and importance of approaching leadership from a dyadic perspective, opposed to an one size fits all ‘average leadership style’ (ALS) approach that was more prominent in leadership research. Nevertheless, these early studies provided some of the earliest evidence of differential treatment by leaders, which helped to motivate the emerging interest in LMX differentiation.

Revived Interest in LMX Differentiation

Around the mid-2000s, interest in understanding how differences in LMX quality affect work-related outcomes began to reemerge. In one of the most recognized papers extending the study of LMX to the workgroup, Liden, et al. (2006) defined LMX differentiation as “the degree of variability in the quality of LMX relationships formed within work groups [by a leader]” (p. 723). Around the same point in time, Ford and Seers (2006) conducted a workgroup study and found evidence of a negative relationship between LMX differences and perceptions of supportive team climate. Relatedly, Boies and Howell’s (2006) study found a negative relationship between LMX differences and team potency (i.e., the collective belief in a team’s ability; Guzzo & Yost, 1993) and a positive relationship between LMX differences and team conflict (note that the published paper reports the opposite effects, however the authors used a measure of interrater agreement (r_{wg}) to measure differentiation, suggesting that the direction of their reported correlations should be reversed).

These findings were also corroborated in Hooper and Martin’s (2008) study at the individual-level that found evidence of a positive relationship between perceived variability in LMX relationships and conflict in workgroups. Finally, the results from Liden, et al. (2006) study demonstrated that (a) LMX differences can have opposing effects for higher vs. lower LMX members and (b) that differentiation could actually benefit collective performance, but only under conditions of high task interdependence. Together, these exemplar studies represent the reemerging interest in LMX differentiation and demonstrate the important implications that LMX differences can have for work outcomes.

The increased attention towards LMX differences prompted Henderson, et al. (2009) to review the extant literature and propose an organizing framework for examining the possible

antecedents and consequences of LMX differentiation. To date, however, the burgeoning evidence on LMX differentiation has consistently found mixed empirical results and generalizable conclusions remain scarce. Specifically, in recent reviews of the leader-member exchange literature Anand, et al. (2015) conclude that “findings on the effects of LMX differentiation have been mixed at best” (p. 288) and Erdogan and Bauer (2015) stated that “this topic [LMX differentiation] is understudied and conclusive findings are hard to come by” (p. 418).

On one hand, some studies have leveraged role theory and social exchange theory to explain the positive association between LMX differences and work outcomes. For example, Li and Liao (2014) found that LMX differentiation increased role engagement for members with high LMX quality. Haynie and colleague’s (2014) found evidence that differentiation can promote individual performance, but only when distributive justice climate was low in a workgroup. On the other hand, studies have leveraged research on social comparison and relative deprivation to explain the negative association between LMX differences and work outcomes. For example, Auh, Bowen, Aysuna, and Menguc (2016) found that LMX differences was negatively related to perceptions of workgroup service climate, and that this relationship was mediated through relational conflict. Moreover, other studies have reported a non-significant relationship between LMX differences and work outcomes, suggesting that research should view differentiation as a boundary condition that qualifies the effects of LMX on individual work outcomes. For example, Erdogan and Bauer (2010) found that differentiation had no significant effect on employee attitudes (e.g., commitment and satisfaction with coworkers), and whether differentiation would be positively or negatively related to individual outcomes was dependent on a workgroup’s justice climate.

What is clear from this emerging literature is that researchers should not view differentiation as unilaterally good or bad (Anand, et al., 2015; Kauppila, 2016), but as having complex relationships with both individual and workgroup outcomes involving countervailing forces (Martin, et al., 2018). It should also be noted, however, that the design of studies on LMX differentiation to date have largely collected data at a single time point (or within a short period of time), at times using multisource data from supervisors and their subordinates. Thus, as with research on LMX in general, it is difficult to assess the causal order of these relationships since few studies have captured the development of LMX relationships over time prior to examining the effects of differentiation.

Theoretical Underpinnings of LMX Differentiation Research

As previously noted, how individuals perceive their work environment is importantly affected by the social context (George & Jones, 1997; Johns, 2006), particularly when no absolute (i.e., objective) reference point exists to assess one's relative standing (Heslin, 2003). This has led to the recognition that assessments of LMX differences are made in relation to other coworkers' relationships with the leader (Anand, et al., 2015; Henderson, Wayne, Shore, Bommer, & Tetrick, 2008). As such, LMX scholars have predominantly viewed differences in LMX relationships through the lens of social comparison research (Buunk & Gibbons, 2007; Festinger, 1954).

Importantly, social comparisons have been acknowledged as "a principle element of organizational life" (Liden, et al., 2016, p. 144) and refers to "the process of thinking about information about one or more other people in relation to the self" (Wood, 1996, p. 520). This suggests that social comparison processes are central to an individual's evaluation of their work environment (Greenberg, Ashton-James, & Ashkanasy, 2007). In the context of work

relationships, social comparisons between coworkers are innate and ubiquitous because employees lack objective information that can inform their perceptions of their relationship quality with others (Liden, et al., 2016). In addition, each and every relationship an employee has at work is embedded in a system of social relationships within the broader work environment (Balkundi & Kilduff, 2006; Liden, et al., 1997), suggesting that social comparison information of one's relative position is obtained from multiple comparison referents. Furthermore, research based on social comparison theory has consistently shown that an individual's standing relative to referent others can influence one's attitudes and behaviors in the workplace (e.g., Ambrose, Harland, & Kulik, 1991; Gibbons & Buunk, 1999; Goodman & Haisley, 2007; Lam, Van der Vegt, Walter, & Huang, 2011; Spence, Ferris, Brown, & Heller, 2011; Wood, 1989).

Building upon the general notion that employees rely upon social comparisons to make sense of their work environment, LMX scholars have integrated other theoretical perspectives to explain how differences in LMX relationships influence employees and their work outcomes. For example, Bolino and Turnley (2009) argued that the majority of LMX research has focused on the positive benefits of high-quality LMX and a lack of attention has been devoted to understanding the processes and outcomes for employees with low-quality LMX. To extend the study of LMX differences, Bolino and Turnley (2009) leveraged relative deprivation theory (Crosby, 1976; Smith, Pettigrew, Pippin, & Bialosiewicz, 2012) as an overarching theoretical framework to explain how comparisons of LMX quality between an individual and a referent coworkers can lead those with a lower LMX quality to experience negative emotions due to a sense of felt deprivation. Specifically, relative deprivation theory argues that felt deprivation (i.e., judgments that one is worse off in comparison to others) can cause feelings of anger and resentment (Crosby, 1976; Smith, et al., 2012), subsequently influencing how a person reacts to

differences in LMX quality. Indeed, anger and resentment are two emotions that have been shown to have important implications for work relationships and outcomes, such as an employee's relationship with their leader (Dasborough, Ashkanasy, Tee, & Tse, 2009; Tse, Troth, & Ashkanasy, 2015; Tse, Troth, Ashkanasy, & Collins, in press), the relationships between coworkers (Tse, et al., 2013), and the functioning of the workgroup as a unit (see Barsade & Gibson, 2007; Barsade & Knight, 2015).

Once an individual experiences a sense of relative deprivation, they can react in positive or negative ways. On one hand, low LMX status members may react in positive ways, such as becoming more motivated to improve their relative standing through constructive changes in their work (Crosby, 1984; Martin, 1981). For example, individuals may put in greater effort to build a stronger exchange relationship with their leader or seek ways to become part of the in-group (Bolino & Turnley, 2009). On the other hand, low LMX status members may react in negative ways, particularly when individuals' have a low sense of self-efficacy or sense of control in their exchange relationships with the leader. For example, when experiencing a sense of relative deprivation, employees may withdraw from their work or engage in counterproductive behaviors towards others (Toh & Denisi, 2003). Taken together, relative deprivation theory provides a useful perspective to understand how differences in LMX quality are perceived by employees with a low-quality LMX relationship and the subsequent behavioral responses to differentiation.

In addition to relative deprivation theory, LMX researchers have also studied differences in LMX quality through the lens of organizational justice theory. The original conceptualization of LMX theory argues that leaders should differentiate their relationships with subordinates to make efficient use of their limited resources (Dansereau, et al., 1975; Graen & Uhl-Bien, 1995;

Liden & Graen, 1980). This is aligned with the principle of equity in organizational justice research that suggests individuals seek to maintain a balance between their inputs and outcomes, in comparison to others around them (Adams, 1965). Based on organizational justice theory, members that have a higher-quality LMX relationship develop positive attitudes that lead to beneficial work outcomes compared to their coworkers that have a lower-quality LMX relationship (Anand, et al., 2015).

These arguments are supported through the accumulated research on organizational justice that has consistently demonstrated the positive relationship between various justice dimensions (i.e., distributive, procedural, informational, interpersonal) and work outcomes (for meta-analytic reviews, see Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt et al., 2013). From the lens of organizational justice theory, differences in LMX relationships can be perceived as unfairness by some members within the workgroup and, as a result, these individuals may react in undesirable ways. Negative reactions to differentiation are often the strongest when there is a lack of transparency in the decision-making process of how resource allocations are made by supervisors and the extent that decisions are viewed as consistent, accurate, unbiased, or open to voice or input from employees (Leventhal, Karuza, & Fry, 1980; Thibaut & Walker, 1975). Indeed, Erdogan and Bauer (2010) found that workgroups with a high-level of procedural justice climate can mitigate, and may even reverse, the negative relationship between LMX differentiation and (a) organizational commitment and (b) satisfaction with coworkers. As such, the authors concluded that LMX differences is detrimental for individuals and their workgroups because it creates a sense of injustice among members, leading to negative attitudes and behaviors that reduce workgroup effectiveness. Taken together,

organizational justice theory provides a useful perspective to explain why differences in LMX relationships influence employee attitudes and behaviors.

In summary, the extant literature has largely drawn from social comparison research to understand the LMX differentiation phenomena. Incorporating relative deprivation and organizational justice theories have provided useful perspectives to explain the effects of LMX differences on individuals. Up to this point, I have referred to “LMX differentiation” as a broad representation of the extant research examining how differences in LMX relationships influence workplace outcomes. In the following sections, I examine this literature with more specificity and organize the remainder of my literature review based on the level of analysis prior studies on LMX differentiation have taken.

Individual-Level Perspectives of LMX Differentiation

As previously noted, how an individual perceives their work environment is importantly influenced by their surrounding context (George & Jones, 1997; Johns, 2006), particularly when no absolute (i.e., objective) reference point exists to assess one’s relative standing (Heslin, 2003). This has been argued to lead individuals to engage in comparisons with relatively similar others, such as those performing similar roles or are in the same work unit, to obtain social information that can provide a point of reference (Buunk & Gibbons, 2007; Salancik & Pfeffer, 1978; Sherony & Green, 2002). Conceptually, in the context of LMX differences, researchers have generally approached this phenomenon in similar ways. That is, employees derive a sense of their relative standing based on their observations and interpretations of social information derived from cognitive processes such as social comparisons. However, existing approaches to conceptualizing and measuring LMX differences have varied. Below, I unpack how existing research has operationalized LMX differentiation at the individual-level.

Relative LMX. To conceptualize an individual's LMX quality relative to other coworkers, one of the first approaches taken was to compare one's exchange quality in relation to the average of the workgroup's (Henderson, et al., 2008). This has led scholars to coin the term *relative leader-member exchange* (rLMX; Harris, et al., 2014; Hu & Liden, 2013; Tse, Ashkanasy, & Dasborough, 2012) to distinguish it from prior LMX research that only considers the exchange quality of a focal employee without consideration of their local context. Specifically, relative LMX is conceptualized as an individual-level LMX variability measure and operationalized as the deviation score of each member's LMX score from the average LMX in their workgroup (Henderson, et al., 2008).

More recently, two studies have used multilevel techniques to account for the non-independence that exists when multiple subordinates are nested under the same supervisor and assessed relative LMX as the difference between the estimated parameter coefficients between each member's LMX score and the average LMX in their workgroup (Hu & Liden, 2013; Vidhyarthi, Liden, Anand, Erdogan, & Ghosh, 2010). Importantly, relative LMX is argued to represent an *indirect* measure of LMX differences in a workgroup (Martin, et al., 2018), because it is derived from each member's reported LMX score with the group leader.

Empirical Studies using Relative LMX. Building upon LMX and social comparison theories, Tse, et al. (2012) proposed that the relationship between relative LMX (after controlling for a focal employee's LMX quality) was related to job performance. The authors also predicted that these effects are mediated through an individual's social identification with their workgroup. Using a sample of Australian bank employees, consisting of 252 supervisor-subordinate dyads in 42 bank branches, Tse, et al. (2012) found support for these predictions, suggesting that relative LMX was positively related to both social identification and job performance. In addition, the

relationship between relative LMX and job performance was partially mediated through social identification, and the authors found evidence that these effects were strongest for employees that were low on negative affectivity. Empirically, the authors tested their model using regression analyses, controlling for LMX quality prior to examining the effects of relative LMX on their outcomes. The authors concluded that their results demonstrate the predictive validity of relative LMX on job performance, above that of LMX quality alone.

In a separate study, Li, Feng, Liu, and Cheng (2014) leveraged social comparison theory to explore the relationships between relative LMX, psychological contract fulfillment, task performance, organizational citizenship behaviors, and innovative behaviors. Specifically, the authors argued that employees higher on relative LMX would receive more resources and rewards from their leader, leading to feelings of psychological contract fulfillment from their organization. Additionally, psychological contract fulfillment would mediate the relationship between relative LMX and work outcomes (task performance, organizational citizenship behaviors, and innovative behaviors).

Using a sample of 288 supervisor-subordinate dyads from 39 Chinese bank enterprises, Li, et al. (2014) tested their predictions and found that psychological contract fulfillment mediated the relationship between relative LMX and both task performance and innovative behaviors, but not organizational citizenship behaviors. Empirically, the authors calculated relative LMX as the algebraic difference between an individual's LMX quality and the group's average LMX quality, and tested their predictions using regression analyses. The authors' findings present an alternative mechanism through which relative LMX is related to work outcomes, namely psychological contract fulfillment.

Approaching relative LMX from a different theoretical perspective, Epitropaki and Martin (2013) leveraged Foa and Foa's (1980) resource theory of social exchange to develop predictions about how the relationships between different influence tactics (soft, rational, and hard tactics) and both transformational and transactional leadership behaviors were jointly contingent upon both relative LMX and perceived organizational support (i.e., a three-way interaction). With respect to transformational leadership, Epitropaki and Martin (2013) posit that when relative LMX was low, the positive relationship between transformational leadership and soft tactics would be stronger (and the effects would be strongest under conditions of high perceived organizational support). When relative LMX was high, the negative relationship between transformational leadership and hard tactics would be stronger (and the effects would be strongest under conditions of high perceived organizational support). With regards to transactional leadership, the authors argued that when relative LMX was low, the positive relationship between transactional leadership and both hard influence tactics and soft influence tactics would be stronger (and the effects were strongest under conditions of low perceived organizational support).

Using a sample of two-hundred employees from seven British companies, Epitropaki and Martin (2013) tested their predictions and found support for almost all of their three-way interactions. The only unsupported hypothesis dealt with the moderating influence of relative LMX on the positive relationship between transactional leadership and a leader's use of soft influence tactics. Empirically, the authors operationalized relative LMX as the algebraic difference between an individual's LMX quality and the group's average LMX quality, which, according to the authors, serves to address issues with the use of difference scores at the individual-level. This study demonstrates the importance of relative LMX as a boundary

condition that qualifies the relationships between both transformational and transactional leadership behaviors and their relationships with hard and soft influence tactics.

More recently, Zhao (2014) explored the relationship between relative LMX and employee voice behaviors, predicting a positive relationship that would be mediated through affective commitment. In addition, the positive relationship between relative LMX and affective commitment would be stronger for employees with a lower sense of traditional Chinese values (i.e., “Chinese traditionality”). Using a sample of 358 employees and 96 supervisors, Zhao (2014) found support for all of their hypothesized relationships. Specifically, relative LMX was positively related to employee voice and affective commitment. In addition, the effects of relative LMX on employee voice were mediated through affective commitment. Moreover, this relationship was contingent on an individual’s sense of Chinese traditionality such that the relationship was stronger for employees low on traditional Chinese values and non-significant for employees high on Chinese traditionality. Empirically, the authors operationalized relative LMX as the algebraic difference between an individual’s LMX quality and the group’s average LMX, and tested their model controlling for LMX quality prior to examining the effects of relative LMX on their outcomes. These findings provide evidence that not only supports the relationship between relative LMX and employee voice, but also the important role that an individual’s sense of cultural values can have on this relationship.

In another study, Vidyarthi, et al. (2010) set out to examine LMX social comparisons (discussed in the following section) and establish the differences between relative LMX and LMX social comparisons. Specifically, the authors argue that relative LMX represents the actual degree which a focal individual’s LMX score differs from the average LMX of the workgroup, whereas LMX social comparisons represents a subjective assessment taken directly from each

employee. As such, relative LMX represents an indirect and more distal measurement of differentiation, whereas LMX social comparisons represent a more direct and proximal measurement of differentiation.

In addition, Vidyarthi, et al. (2010) described the limitations of approaching relative LMX as an algebraic differences score (an approach taken in the studies on relative LMX discussed previously) and instead use hierarchical linear modeling to specify the appropriate level of analysis (i.e., individual-level LMX at level-1, workgroup average LMX at level-2). This means that, empirically, relative LMX is treated as the algebraic difference between the estimated coefficients of individual-level LMX and a workgroup's average (Edwards & Parry, 1993) and the statistical significance for the effects of relative LMX are obtained indirectly through multilevel bootstrapping methods. Because the focus of their study was on LMX social comparisons, there was no report of the direct effects of relative LMX on outcomes. However, and most notably, this study was the first to operationalize relative LMX as the incongruence between individual- and group-level LMX scores using multilevel techniques.

Finally, Hu and Liden (2013) used research on social comparisons as a theoretical framework to examine the relationship between relative LMX and in-role performance, organizational citizenship behaviors, and job satisfaction. These relationships were hypothesized to be mediated through an employee's self-efficacy. In addition, the relationship between relative LMX and self-efficacy would be moderated by an individual's level of identification with their team, such that relationship would be weaker when team identification was high. Using a sample 275 employees nested within 35 teams, Hu and Liden (2013), found support for most of their hypotheses. Specifically, the effects of relative LMX on all of their work outcomes (in-role performance, organizational citizenship behaviors, and job satisfaction) were mediated through

self-efficacy. In addition, the effects of relative LMX on self-efficacy were attenuated when team identification were high for the individual. Empirically, the authors followed Vidyarthi and colleague's (2010) approach in treating relative LMX as the algebraic difference in the estimated parameter coefficients between LMX and the workgroup average LMX. Based on the results from hierarchical linear modeling, Hu and Liden (2013) concluded that their findings extend research on relative LMX by demonstrating its effects on additional attitudinal and behavioral outcomes, as well as identifying individual and contextual conditions that weakened these relationships.

Taken together, these studies not only suggest that an individual's relative LMX quality is positively associated with work attitudes, in-role behaviors, and extra-role behaviors, but also that empirical differences in LMX relationships between individuals in the same workgroup represents an important source of variability that has predictive validity for work outcomes. In viewing these studies in aggregate, the findings are largely consistent with the voluminous literature that supports the seemingly ubiquitous positive benefits derived from high-quality LMX relationships for an employee. However, it is important to note that the concept of relative LMX also implies a zero-sum outcome for the workgroup itself. That is, subordinates with a relatively higher exchange quality enjoy the benefits of their LMX status, whereas those with a relatively lower exchange quality do not. In addition, several scholars have noted that as an *indirect* assessment of LMX differences, relative LMX relies upon empirical differences between one's exchange quality and the average LMX quality in the workgroup (Martin, et al., 2018; Vidyarthi, et al., 2010), inferring that differences are perceived and interpreted similarly for individuals with the same levels of relative LMX.

LMX Social Comparison. In contrast to a relative LMX approach, Vidyarthi, et al. (2010) argued that when leaders differentiate their LMX relationships, the *perceived* differences in relationship quality triggers social comparison processes that leads an individual to search for information about their own standing within the workgroup. Indeed, organizational scholars have recognized that perceptions of the social environment are generally more influential on an employee's work attitudes and behaviors (Kristof-Brown, Zimmerman, & Johnson, 2005). This led Vidyarthi, et al. (2010) to develop a new measure of LMX differentiation termed *leader-member exchange social comparisons* (LMXSC) defined as “the comparison between one's own LMX and that of coworkers” (p. 850). This is an important extension in LMX differentiation research because LMXSC is directly obtained from the source (i.e., each focal employee) and captures an employee's subjective assessment of their own LMX standing relative to others in the workgroup, thereby allowing researchers to better assess the social comparison process than indirect measures (Martin, et al., 2018). In addition, unlike rLMX, which is by definition a zero-sum game within the team, the subjective nature of LMXSC means that it is not necessarily zero-sum. Specifically, it is possible for every employee in the team to perceive higher than average LMXSC compared to every other employee in the team.

Empirical Studies on LMX Social Comparisons. To date, several empirical studies have utilized an LMX social comparison approach to investigate differences in LMX relationships. First, Vidyarthi, et al. (2010) set out to establish a measure of LMX social comparisons. Based on items developed in Erdogan's (2002) doctoral dissertation, the authors refined an instrument to directly assess perceptions of LMX differences, distinguish it from relative LMX, and examine its relationships with organizational citizenship behaviors and job performance. Specifically, Vidyarthi, et al. (2010) proposed that LMX social comparisons would mediate the

positive relationships between relative LMX and both organizational citizenship behaviors and job performance. Using a sample of 254 employees nested under 50 supervisors from a large manufacturing company in India, the authors provide evidence that (a) LMX social comparisons was positively related to job performance and organizational citizenship behaviors and (b) predicted additional variance in these outcomes above the overall LMX quality between a supervisor and subordinate. In addition, LMXSC was found to fully mediate the effects of relative LMX on organizational citizenship behaviors and partially mediate the effects of relative LMX on job performance. These findings serve to extend LMX differentiation research by establishing a direct perceptual measure of LMX differences and provide evidence of its distinctiveness and predictive validity on work outcomes.

In a separate study, Huang, Shi, Xie, and Wang (2015) leveraged social comparison and relative deprivation theories to explore the relationships between LMX social comparisons, organizational justice, and deviant behaviors. Specifically, the authors argued that LMXSC would be negatively related to both supervisor-directed and organizational-directed deviance (i.e., counterproductive behaviors that violate norms; Robinson & Bennett, 1995). Based on the extant research that has shown how differences in LMX relationships can elicit perceptions of unfair treatment, the authors predicted that the relationship between LMXSC and supervisor-directed deviance would be mediated through interpersonal justice, whereas the relationship between LMXSC and organizational deviance would be mediated through procedural justice.

Using a sample of 203 employees and 50 supervisors from 12 different Chinese companies, Huang, et al. (2015) tested their predictions and found evidence that LMXSC was positively related to both procedural and interpersonal justice (i.e., perceptions of fairness from organizational authorities; Colquitt, 2001), and negatively related to supervisor-directed and

organizational deviance. Procedural justice and interpersonal justice mediated the relationships between LMXSC and (a) organizational deviance and (b) supervisor-directed deviance, respectively. Additionally, the authors identified organizational embodiment (i.e., shared identity with the organization; Eisenberger et al., 2010) as an important moderating factor, such that the effects of LMXSC on supervisor-directed deviance were weaker when the supervisor exhibited high levels of organizational embodiment. These findings provide supporting evidence that direct perceptual measures of differences in LMX relationships are predictive of counterproductive work behaviors.

In another study, Vidyarthi et al. (2016) leveraged social comparison theory (Buunk & Gibbons, 2007; Festinger, 1954) to examine how idiosyncratic deals (i-deals), which refer to informal arrangements that an employee negotiates with their supervisor or organization to benefit themselves and the organization (Rousseau, 2005), are related to task performance. Specifically, the authors proposed that the positive relationship between i-deals and work performance (measured using in-role performance and OCBs) would be mediated through LMX social comparisons (LMXSC). This relationship would be stronger in workgroups that (a) had a low team orientation and (b) were low in task interdependence.

Using a sample of 186 employees in 46 workgroups, Vidyarthi, et al. (2016) tested their hypotheses. The reported correlations from this study showed that LMXSC was positively related to i-deals, in-role performance, and OCBs. Results from hierarchical linear modeling (to account for the nested structure of individuals within workgroups) showed that LMXSC mediated the positive effects of i-deals on task performance. In addition, the authors found evidence of conditional mediation, such that the mediation effects were only significant when team orientation was low. However, Vidyarthi and colleague's (2016) results did not provide

support for the conditional mediation effects through task interdependence. These results provide evidence that LMXSC serves as an important variable that explains how the idiosyncratic deals an employee has with their supervisor and organization are related to both in-role and extra-role behaviors.

Finally, Park, Chae, and Kim (2017) used social exchange theory and conservation of resources theory to explain how job satisfaction and job performance are related. Specifically, the authors proposed that role overload and LMX social comparisons (LMXSC) would moderate the positive relationship between performance and job satisfaction, such that the relationship would be (a) weaker when role overload was low and (b) stronger when LMXSC was high. Moreover, the authors predicted a three-way interaction between performance, role overload, and LMXSC, such that job satisfaction would be lowest when task performance and role overload were high, but LMXSC was low. To test these predictions, the authors collected data from 136 supervisor-subordinate dyads across a variety of South Korean industries (technology, financial, food service, and manufacturing).

Correlations from Park and colleague's (2017) study revealed that LMXSC was not significantly correlated with task performance, role overload, or job satisfaction. Using regression analyses and controlling the effects of age gender, tenure, task performance, and role overload, the authors found a positive direct relationship between LMXSC and job satisfaction. Interestingly, the authors did not find support for a positive relationship between performance and job satisfaction and, instead, found a non-significant relationship. The authors also reported a significant two-way interaction effect for performance and LMXSC when predicting job satisfaction, such that the relationship was negative when LMXSC was low. Moreover, a significant three-way interaction was reported (between task performance, role overload, and

LMXSC), that indicated that the negative relationship between task performance and job satisfaction was strongest when role overload was high and LMXSC were both low. These findings provide evidence that LMXSC may also serve as an important boundary condition that qualifies the relationship between performance and job satisfaction.

In short, studies to date provide evidence that an individual's subjective appraisal of their LMX standing in comparison to others within their social environment has an important role on how one reacts to differentiation. By capturing an employee's social comparison processes as a result of LMX differences, LMXSC provides a more direct assessment of how an individual perceives and interprets differentiation (an approach I take in this dissertation). Finally, it should be noted that the current conceptualization of LMX social comparison is based on a focal employee's referent comparison to all members of their workgroup, making an assumption that an individual views all group members as interchangeable referents for the focal respondent. By treating all coworkers within a local context as a single entity misses the important variability within each relationship a focal individual may have with different coworkers (a critical issue in the existing LMX differentiation research that I address further below).

Other Approaches to Studying LMX Differences. In a separate study, Harris, et al. (2014) leveraged Tyler and Blader's (2000, 2003) group engagement model to develop predictions about how differences in LMX relationships influences (a) the positive relationship between LMX quality and organizational citizenship behaviors, and (b) the negative relationship between LMX quality and turnover intentions. The authors examined differences in LMX relationships at both the individual- and group-level. Specific to the individual-level, Harris, et al. (2014) introduced a new measure of differentiation labeled as *LMX relational separation* (LMXRS). Similar to relative LMX, LMXRS measures an individual's differences in LMX

scores relative to a focal employee's coworkers. However, in contrast to relative LMX, the authors' argue that LMXRS is "unique in that it ... emphasizes the similarity between an individual's LMX and other members' LMX despite absolute levels" (p. 317).

Empirically, LMXRS was operationalized as the sum of squared differences between an individual's LMX with every other coworker's LMX scores, a formula used in Tsui, Egan, and O'Reilly (1992) to study relational separation in workgroups based on demographic variables (e.g., education, gender, ethnicity). Importantly, it should be noted that this measure of LMX differentiation only captures the *separation* of one's LMX from other group members, such that higher scores indicate larger differences. This, however, does not indicate whether the focal employee is higher or lower than workgroup members, but simply that there is separation. Results from Harris and colleagues' (2014) study suggest that greater separation in LMX moderates the positive relationship between leader-member exchange and organizational citizenship behaviors, such that the positive relationship was weakened when relational separation was high. In other words, greater distance (regardless whether it is positive or negative) between a focal employee and other coworkers is associated with less citizenship behaviors.

Summary of Individual-Level Perspectives of LMX Differences. In summary, the extent literature has used various operationalizations to capture differences in LMX at the individual-level. Despite these inconsistencies, existing studies have produced remarkably similar findings as that of the general LMX literature: having a higher quality LMX with the leader across individuals and relative to workgroup members is associated with positive outcomes for the focal employee.

LMX Differentiation as a Group-level Moderator of Individual Work Outcomes

In extending LMX differentiation research beyond examining the focal LMX dyad, some researchers have suggested that LMX differentiation is most suited as a contextual moderator that enhances or detracts from individual work outcomes. Researchers that have studied LMX differences using this approach have generally conceptualized LMX differences as a workgroup-level variable that moderates individual-level relationships. Below, I review the studies that have treated LMX differentiation as a cross-level moderator of individual-level relationships.

Empirical Studies on LMX Differentiation as a Group-level Moderator. First, Liden, et al. (2006) used a multilevel approach to examining the relationship between LMX differentiation (at the group level) and individual job performance. The authors set up competing hypotheses that argued (a) based on the organizational justice literature, LMX differentiation may be negatively related to individual performance as a result of perceived unfairness when leaders allocate resources differentially among group members, and (b) based on role theory and existing LMX research, LMX differentiation may be positively related to performance because a leader is in a position to identify which subordinate would be more or less capable of handling certain tasks. Empirically, the authors operationalized LMX differentiation as the within-group variance in individual-level LMX scores in a workgroup.

Using a sample of 834 employees from 120 workgroups employed across six Fortune 100 companies from various industries, Liden, et al. (2006) did not find evidence of a direct positive or negative relationship between LMX differentiation and individual performance. However, their results did demonstrate that an individual's dyadic LMX quality moderated the relationship between LMX differentiation and individual performance, such that the relationship was positive

only for individuals with low LMX quality. These findings demonstrate the importance of considering differentiation as a boundary condition for individual-level relationships.

Integrating LMX theory and research with the organizational justice literature, Erdogan and Bauer (2010) argued that distributive and procedural justice climate (i.e., a group's shared fairness perception; Whitman, Van Rooy, & Viswesvaran, 2010) will moderate the relationship between LMX differentiation and individual work outcomes. Specifically, when justice climate (both distributive and procedural) are low, the relationship between LMX differentiation would have a negative relationship with (a) job satisfaction, (b) organizational commitment, (c) satisfaction with coworker relations, and (d) helping behaviors towards coworkers, and a positive relationship with (e) withdrawal behavior. Empirically, the authors follow Liden and colleague's (2006) approach and operationalized LMX differentiation as the within-group variance in LMX scores. Using a sample of 276 employees and 25 managers working in a clothing retailer in Turkey, the authors conducted a series of hierarchical linear models for each work outcome. Before testing their interaction hypotheses, Erdogan and Bauer (2010) first tested the direct effects of LMX differentiation on work outcomes, finding (i) a negative relationship to job satisfaction, (ii) no significant relationship to organizational commitment, satisfaction with coworkers, and withdrawal behaviors, and (iii) an unexpected positive relationship with helping behavior towards coworkers.

With regards to Erdogan and Bauer's (2010) interaction hypotheses, the authors did not find support for the moderating influence of distributive and procedural justice climate on the relationship between LMX differentiation and job satisfaction. However, consistent with their hypotheses, the authors did find a negative relationship between LMX differentiation and (a) organizational commitment and (b) satisfaction with coworker, and (c) a positive relationship

with withdrawal behaviors only when distributive or procedural justice climate were low. Finally, counter to their predictions, Erdogan and Bauer (2010) also reported a positive relationship between LMX differentiation and helping behaviors towards coworkers when distributive justice was high. Aligned with research on organizational justice, these results suggest that the negative implications of LMX differentiation on work outcomes (organizational commitment, satisfaction, and withdrawal behaviors) can be mitigated through high levels of distributive justice climate (when rewards and outcomes are equitably allocated) and high levels of procedural justice climate (when the procedures used to determine outcomes are clear).

As discussed previously, Harris, et al. (2014) leveraged Tyler and Blader's (2000, 2003) group engagement model to develop predictions about how LMX differentiation influences (a) the positive relationship between LMX and organizational citizenship behaviors, and (b) the negative relationship between LMX and turnover intentions. In addition to using LMX relational separation as a measure of LMX differences at the individual-level, the authors also considered differences in LMX relationship at the group-level. The authors argued that the positive relationship between individual LMX and work outcomes would be weakened when LMX differentiation was high. Empirically, the authors operationalized LMX differentiation as the variance in individual-level LMX scores for each workgroup. Using a sample of 223 employees nested in 60 workgroups from six state-owned Chinese enterprises, Harris, et al. (2014) found support for their hypothesized relationships and evidence that LMX differentiation (operationalized at the group-level) moderates the individual-level positive relationship between leader-member exchange and organizational citizenship behaviors, such that the positive relationship was weakened when differentiation was high. These findings support the notion that

LMX differentiation at the group-level serves as an important boundary condition of individual-level relationships.

Finally, approaching LMX differentiation from an alternative theoretical perspective, Li and Liao (2014) use role engagement theory (Kahn, 1990) to develop a model explaining the effects of LMX differentiation at the individual-level. The authors predicted that (a) the positive effects of individual LMX quality on job performance would be mediated through role engagement (aligned with existing research) and (b) the positive relationship between individual LMX quality and role engagement would be moderated by LMX differentiation, such that the relationship is stronger when LMX differentiation is high. Empirically, the authors operationalized LMX differentiation as the within-group variance of individual-level LMX scores. Using a sample of 375 employees from 82 work teams from a large commercial bank in Mideastern China, the authors tested and found support for their predictions. Specifically, role engagement mediated the positive effects of individual LMX quality on job performance, and the relationship was strengthened when LMX differentiation was high. These findings demonstrate that high levels of LMX differentiation can strengthen the positive effects of individual LMX quality on role engagement, and subsequently enhance job performance.

Summary of Research on LMX Differentiation as a Group-level Moderator. In summary, the studies discussed above demonstrate that differences in LMX relationships, construed as a workgroup property, can serve as an important boundary condition on individual work outcomes.

LMX Differentiation as an Input to Group Effectiveness

In addition to serving as an important boundary condition for individual-level work outcomes, LMX scholars have also approached LMX differentiation as an important input to

group effectiveness (Day, Gronn, & Salas, 2004). However, the complex relationships that LMX differentiation can have on group outcomes may involve countervailing forces that present paradoxical situations for leaders and their organizations (Anand, et al., 2015; Li & Liao, 2014).

On one hand, aligned with the underpinnings of LMX research, differentiating LMX relationships with subordinates allows a leader to be most effective in allocating the limited resources at their disposal towards achieving collective goals (Graen & Uhl-Bien, 1995; Liden & Graen, 1980). On the other hand, differentiation may inhibit the development of positive group attitudes (Chen, et al., 2018; Erdogan & Bauer, 2010) and detract from effective group processes (Cobb & Lau, 2015; Herdman, et al., 2017), both of which are necessary for achieving higher levels of group performance (Ilgen, Hollenbeck, Johnson, & Jundt, 2005; LePine, et al., 2008; Mathieu, Maynard, Rapp, & Gilson, 2008). Below, I organize the review of LMX differences as an input to group outcomes based on individual studies.

Empirical Studies on LMX Differentiation at the Workgroup Level. As discussed previously, Liden, et al. (2006) examined LMX differentiation as a group-level moderator of individual-level relationships. In addition, the authors also considered the direct relationship between LMX differentiation and group performance. Similar to their individual-level predictions, Liden, et al. (2006) also present competing hypotheses for the positive and negative direct effects LMX differentiation can have on group performance. Results from their study showed no significant relationship between LMX differentiation and group performance. However, as noted previously, the authors found evidence that task interdependence (at the workgroup level) moderates the relationship, such that LMX differentiation had a positive effect on group performance only when task interdependence was high.

Interestingly, these findings run counter to theoretical arguments from the social comparison and organizational justice perspectives that suggests differences in LMX relationships would be more salient when coworkers interact more (i.e., higher task interdependence). However, these results do highlight the importance of considering group-level contingencies that can moderate the effects of LMX differentiation on group outcomes, leading Liden, et al. (2006) to conclude that the answer to whether differentiation hurts or enhanced performance is “it depends” (p. 738) and that “the relationship between LMX differentiation and group performance could be best understood by considering moderators” (p.739).

In another study, as discussed in the prior section as well, Li and Liao (2014) used role system theory (Katz & Kahn, 1978) to develop predictions regarding the effects of LMX differentiation on workgroup outcomes. Specifically, the authors hypothesized that LMX differentiation would have a negative indirect effect on team performance, mediated through team coordination. Results of their study present several notable findings. First, LMX differentiation was negatively related to team coordination, which mediated the negative indirect effects of LMX differentiation on team performance, thereby supporting the authors’ hypothesis. Second, when testing their mediation hypothesis, the authors’ results also revealed a positive direct relationship between LMX differentiation and team performance (when accounting for the effects of coordination on performance). Finally, the total aggregate effects were not significant, as evident in their bivariate correlations between LMX differentiation and team performance. Thus, the results from Li and Liao’s (2014) study clearly demonstrate how LMX differentiation can negatively impact team coordination, however the empirical findings regarding differentiation and performance suggests that LMX differentiation may not be unilaterally good or bad in workgroups, a sentiment echoed in reviews of this literature (Anand, et al., 2015).

Using a sample of Chinese information system development teams across three industries (automobile manufacturing, communication, and transportation), Cheng and Li (2012) examined how average group-level LMX and LMX differentiation were related to cooperation between group members. Using a cross-sectional survey design, the authors found evidence that team cooperation was positively related to both the average workgroup LMX quality and the level of LMX differentiation. In addition, LMX differentiation interacted with group LMX quality to predict team innovation, such that higher levels of differentiation actually increased innovation and lower levels reduced innovation. The results from Cheng and Li's (2012) study suggest that LMX differentiation can have a positive effect on innovation in workgroups.

In contrast to the positive evidence of LMX differentiation on workgroup outcomes, other studies that have found that differentiation can have a negative effect in workgroups. For instance, using a cross-sectional survey design, Boies and Howell (2006) surveyed a number of military teams in the Canadian army to examine (a) how the average LMX quality of all group members was related to collective potency and conflict, and (b) whether LMX differentiation interacted with the average group LMX quality to predict additional variance in these outcomes. The authors' results showed that the average LMX quality in workgroups was positively related to group potency and negatively related to group conflict. In addition, LMX differentiation moderated these relationships, such that higher levels decreased group potency and increased group conflict. Although, Boies and Howell's (2006) study was based on a small number of military teams ($N = 37$) and utilized a cross-sectional research design, it should be noted that their findings run counter to conclusions drawn by Cheng and Li's (2012).

In another previously discussed study, Erdogan and Bauer (2010) examined the moderating role of LMX differentiation on individual-level outcomes. The authors grounded

their conceptual model using organizational justice theories and suggested that LMX differentiation would also be importantly related to shared justice climates in workgroups, hypothesizing that these group cognitions would interact with LMX differentiation to predict individual-level outcomes. Using a sample of sales associates and stockroom workers in a Turkish organization, the authors found a negative relationship between LMX differentiation and both distributive and procedural justice.

Although the emphasis of their study was focused on LMX differentiation as a cross-level moderator for predicting job satisfaction, organizational commitment, satisfaction with coworkers, and helping behaviors, Erdogan and Bauer's (2010) results at the group-level were also well-aligned with research on how individual perceptions contribute to the formation of shared justice cognitions that importantly relate to the effectiveness of workgroups (e.g., Colquitt, Noe, & Jackson, 2002; Roberson, 2006; Roberson & Colquitt, 2005).

Integrating the Mixed Evidence on LMX Differentiation in Workgroups. More recently, Yu, et al. (2018) theoretically integrated LMX differentiation research in an effort to resolve the inconsistent empirical findings across group-level studies. Using the justice principles of equity and equality within an allocation preferences theory framework (Leventhal, 1976a, 1976b; Leventhal, et al., 1980), the authors meta-analytically synthesized the accumulated research on LMX differentiation in workgroups. The authors predicted that (a) based on the principle of equity (and aligned with LMX theory), differences in LMX relationships would be beneficial for group performance and (b) based on the principle of equality and social exchange theory, LMX differentiation would be harmful for collective states and group processes. The meta-analytic results from their study did not support the hypothesized positive relationship between LMX differentiation and group performance. However, Yu, et al. (2018) did find a

consistent negative effect of LMX differentiation on emergent states (e.g., group attitudes) and group processes (e.g., coordination, team-member exchange), both of which represent more proximal workgroup outcomes.

To extend their investigation of LMX differentiation in workgroups, Yu, et al. (2018) also tested their meta-analytic relationships within the popular input-mediator-outcome (IMO) model of group effectiveness (see Ilgen, et al., 2005; Mathieu, et al., 2008; McGrath, 1984). Interestingly, their results suggest that LMX differentiation not only had a negative relationship with more proximal workgroup outcomes (i.e., group processes and emergent states), but also that the indirect negative relationship (via proximal outcomes) was suppressing the direct positive relationship between differentiation and group performance (a more distal outcome). Theoretically, these findings are aligned with the core tenants of LMX theory and research that suggest effective leaders differentiate their LMX relationships within workgroups. Empirically, these results provide insights into both the positive and negative relationships uncovered in prior studies.

Emerging Evidence of a Curvilinear Relationship of LMX Differentiation in Workgroups. More recently, several studies have begun to uncover evidence of a curvilinear relationship between LMX differentiation and group-level outcomes, suggesting an alternative explanation to the mixed empirical findings present in the literature. For example, using a sample collected from nine different high-technology companies in China, Li, Fu, Sun, and Yang (2016) argued that LMX differentiation would have neither a direct positive nor a direct negative relationship on team creativity. Instead, the authors argued that a moderate amount of differentiation can be beneficial for the team because leaders can (ideally) optimize their resource allocations to group members that are more creative, assuming that not all members are

equally creative. Their results suggest that differentiation did not have a significant linear effect on team creativity, however LMX differentiation did have a significant curvilinear (inverted-U shaped) relationship on creativity. The authors also found that the curvilinear relationship was moderated by the average LMX quality of the workgroup, such that the relationship only held for groups that were low on LMX quality overall.

In another study, Lee and Chae (2017) leverage a status-conformity perspective (Phillips & Zuckerman, 2001) to argue that LMX differentiation would exhibit a curvilinear (inverted U-shaped) relationship with group performance, because at moderate levels of differentiation in a workgroup, the high- and low-status LMX members are not sharply divided yet (i.e., a clear split between in-group and out-group). However, the authors argued that low levels of differentiation implies an improper allocation of resources by the leader and high levels of differentiation induces a strong sense of unfairness. Using a multisource (employees and HR managers) dataset obtained from the Korea Institute of Vocational Education and Training survey, the authors did not find evidence of a significant linear relationship between LMX differentiation and group performance, but did find support for their prediction regarding a curvilinear relationship. In addition, the curvilinear relationship was moderated by (a) gender diversity, such that the peak of the inverted-U was higher (when predicting performance) and occurred at higher levels of differentiation, and (b) age diversity, such that the curvilinear relationship was only significant at high levels.

Approaching the question of how LMX differentiation influences group outcomes from an alternative perspective, Sui, et al. (2016) leverage social categorization theory (Hogg, 2011; Hogg & Terry, 2000) to develop their curvilinear (inverted U-shaped) relationship hypothesis between LMX differentiation and group performance. Similar to Lee and Chae (2017), the

authors argued that (a) leaders are not effectively allocating resources at low levels of differentiation, (b) sub-group effects from social categorization processes are more likely to occur at high levels of differentiation, and (c) a more effective allocation of leader resources with minimal sub-group effects occurs at moderate levels of differentiation. Sui, et al. (2016) collected multisource data (supervisors and subordinates) from a sample of three Chinese organizations in different industries (pharmaceutical, telecommunication, and gasoline pipeline manufacturing). Their study also found a non-significant linear relationship between LMX differentiation and performance, however there was a significant curvilinear relationship. In addition, the curvilinear relationship was moderated by (a) team size, such that the peak of the inverted-U was higher (when predicting performance) and occurred in larger workgroups, and (b) power distance, such that peak of the curve occurred at higher levels of differentiation for groups with a higher cultural power distance.

Summary of Research on LMX Differentiation at the Group-level. Taken together, the accumulated studies to date clearly demonstrate the complex relationships that LMX differentiation can have in workgroups. Past studies have documented a positive, negative, and curvilinear relationship with work outcomes. Aligned with the fundamental underpinnings of LMX research, differential treatment of subordinates may be necessary for leaders to be effective in achieving group performance (Graen & Uhl-Bien, 1995; Liden & Graen, 1980). Yet, these differences may also elicit social comparisons processes (Anand, et al., 2011; Vidyarthi, et al., 2010) that lead to judgments of relative deprivation in employees with lower quality LMX relationships (Anand, et al., 2015; Bolino & Turnley, 2009), which subsequently impair effective interpersonal processes between coworkers (e.g., Hooper & Martin, 2008; Li & Liao, 2014) and the emergence of positive group climates (e.g., Erdogan & Bauer, 2010).

Critical Issues in LMX Differentiation Research

Although early conceptualizations of leader-member exchange (Dansereau, et al., 1975; Liden & Graen, 1980) explicitly highlighted the dyadic nature of the exchange relationship between a leader and subordinate, reviews of the literature clearly show the need to move beyond a simplistic dyadic focus on a single leader-follower relationship (e.g., Liden, et al., 1997). Despite the recent emergence of LMX differentiation as a topic of scholarly interest, empirical findings within this literature remain consistently inconsistent. Existing studies have found positive and negative effects, as well as curvilinear relationships, on individual- and group-level work outcomes. It is clear that the effects of LMX differentiation are not as ubiquitous as the general positive effects of high-quality LMX for individuals.

Instead, individuals' can perceive, interpret, and react to differential treatment from their leaders in various ways, resulting in a complex relationship with work outcomes at both the individual- and group-level (Martin, et al., 2018; Yu, et al., 2018). Based on the review of the LMX differentiation literature and the various approach existing studies have taken in conceptualizing and operationalizing this phenomena, several critical issues emerge that represents important areas of opportunity.

Critical Issue #1: Conceptualizing LMX Differentiation as a Workgroup

Characteristics. The first critical issue relates to the treatment of LMX differentiation as a workgroup attribute. That is, a number of studies have conceptualized differentiation as a property of the workgroup itself. Typically, these studies draw upon composition models that specify the functional relationships between constructs at different levels of analysis (Chan, 1998; Kozlowski & Klein, 2000). Based on this approach, LMX differentiation fits a *dispersion compositional model*, defined as a group-level characteristic based on the variability of within

group scores, opposed to direct consensus or referent-shift compositional models commonly employed in organizational research. In doing so, researchers treat variability in within-group LMX scores as a theoretically relevant phenomena, instead of error variance that can be reduced through aggregation (Chan, 1998). Viewing differences in LMX relationships as a property of the workgroup assumes that the differentiation process is shared by all coworkers equally (Martin, et al., 2018). This implies that differentiation is (a) equally salient and uniformly observed by all group members and (b) each individual perceives, interprets, and reacts to these differences in a similar manner. However, these assumptions are tenuous at best.

As discussed previously, much of the theoretical rationale surrounding LMX differentiation are directly or indirectly grounded in social comparisons processes. Indeed, in their recent review of work relationships, Liden, et al. (2016) concluded that employees evaluate their own work relationships in the context of other relevant relationships, such as the LMX quality of coworkers under the same leader. According to Festinger's (1954) original theory, individuals seek objective information to accurately evaluate their own standing within a social environment. When no objective information is available, individuals seek out social information through subjective comparisons from similar and dissimilar others in their local environment (Buunk & Gibbons, 2007; Festinger, 1954). Although LMX researchers have argued and found suggestive evidence that differentiation is both salient and observable to coworkers (Sherony & Green, 2002; Tse, et al., 2013), how each employee perceives and interprets social information is subjective. Moreover, individuals commonly exhibit biases in their interpretations that are aligned and consistent with their own self-views.

Over thirty years ago, social information processing theorists posited that individuals' *selectively* attend to and interpret social information from their environment to fulfill specific

psychological needs, thereby influencing one's attitudes and behaviors (Salancik & Pfeffer, 1978; Weick, 1977). Subsequent theory and research supports these ideas. For example, self-verification theory (Swann, 1983) argues that people create a social reality to verify and confirm their own self-conceptions, suggesting that social information may be interpreted differentially based on each individual's self-concept. In support of this perspective, for example, Johnson, Selenta, and Lord (2006) found evidence that the relationships between the salience of different justice-related information (distributive, procedural, and interactional) and work outcomes (e.g., satisfaction, commitment, and support) are dependent on one's self-concept. Using a similar logic, Meister, Jehn, and Thatcher (2014) developed a process framework to examine how individual's differ in their coping responses when social information is incongruent with one's own self-identity (termed *internal identity asymmetry*), leading to differential patterns of responses in their interpersonal work relationships. Finally, research on self-enhancement motives at work suggests that individuals may engage in different strategies – such as defensiveness, positively embracement, favorable construals, and self-affirming reflections – to maintain a positive self-view (Ferris & Sedikides, 2018; Hepper, Gramzow, & Sedikides, 2010).

Taken together, existing psychological theories and empirical studies make a strong case that individuals perceive, interpret, and react to social information in different ways, thereby suggesting that treating LMX differentiation as a property of the workgroup that generalizes to all group members is potentially problematic. Doing so assumes that the differentiation process is *equally* shared by all coworkers and fails to capture (a) the saliency of differences in LMX relationships, (b) how LMX differentiation is interpreted by each person, and (c) the unique behavioral responses an individual can have to as a result of their own subjective interpretations of their social environment.

Critical Issue #2: Failure to Recognize the Relational Nature of Interpersonal

Behaviors. The second critical issue relates to the lack of recognition concerning the relational nature of work interactions. In contrast to studies that have viewed LMX differentiation as a property of the workgroup, a number of studies have viewed differences in LMX relationships as an individual-level difference (e.g., Hooper & Martin, 2008; Vidyarthi, et al., 2010). As previously discussed, this approach has been useful in understanding how differences in LMX quality (i.e., relative LMX or LMX social comparisons) can influence individual work outcomes. While these perspectives are suitable for examining the influence of differentiation on individual work attitudes (e.g., job satisfaction, organizational commitment), it misses important variability across interpersonal behaviors that are relational in nature (e.g., citizenship behaviors and counterproductive behaviors). That is, a focal employee does not behave in the exact same ways towards each coworker, an assumption made when considering differentiation at the individual-level.

This assumption is not only present in the emerging research on LMX differentiation, but also across several existing literatures in organizational research that considers employee behaviors towards others as a generalized aggregate. However, this assumption is problematic because work relationships are inherently relational in nature because employees individual's form differential patterns of interactions with others (Ferris, et al., 2009; Ingram & Zou, 2008). Indeed, studies have found that there is considerable variability in how one individual behaves towards each coworker, often based on the strength, content, and quality of interactions between two individuals (LePine, Methot, Crawford, & Buckman, 2012; Liden, et al., 2016). These observations are similar to existing areas of research that have identified the importance of isolating and separating within- and between-person variability in organizational phenomena,

such as emotional labor (e.g., Scott & Barnes, 2011), work-family conflict (e.g., Ilies, Wilson, & Wagner, 2009), and turnover intentions (e.g., Chen, Ployhart, Thomas, Anderson, & Bliese, 2011). The recognition that a large percentage of variability in these constructs resides at a different level of analyses has opened up new avenues of inquiry in organizational research.

The relational nature of workplace interactions suggests that it is not enough to simply acknowledge that difference in LMX relationships exist and are salient to employees, but that there is substantial variability in how a focal employee behaves towards each coworker as a response to LMX differences between them. Indeed, the theoretical perspectives that have been leveraged to study LMX differentiation suggest that this phenomenon should be approached from a relational perspective. For example, the large body of research on social comparison processes has shown that individuals engage in differential comparison processes (for a review, see Buunk & Gibbons, 2007) and select different referents for comparisons (for a review, see Goodman & Haisley, 2007). The referent used for social comparisons influences one's affective, cognitive, and behavioral responses towards that specific individual (Dasborough & Harvey, 2016; Goodman & Haisley, 2007; Tesser, 1988).

For example, relative deprivation theory (Crosby, 1976) makes it clear that even though two individuals may observe the same situation in a work context, each of them can perceive the situation quite differently (Smith, et al., 2012). Building upon a relative deprivation framework, Bolino and Turnley (2009) argued that perceptions of LMX differences are not a property of a single person or the workgroup, but of each particular relationship an individual has. Aligned with these perspectives, scholars that have taken a network approach to understand LMX (and work relationships in general) have long recognized that the pattern of interactions within a

social structure can enable or constrain interpersonal behaviors (Ferris, et al., 2009; Sparrowe & Liden, 1997).

Taken together, the above discussion suggests that it is important to examine both (a) the differences how a focal employee perceives their LMX standing relative to a referent coworker and (b) there are meaningful differences in how a focal employee behaves towards each referent coworker based on these perceptions. Given the importance of coworker interactions to my theoretical development, I briefly review the literature on coworker interactions in the following sub-section, specifically focusing on the literatures that are closely linked to social exchanges and leader-member exchange.

Coworker Interactions in Workgroups. Coworker interactions have been studied in a variety of ways by organizational researchers. However, the concept most closely linked to social exchange theory and LMX research is team-member exchange (TMX). Developed by Seers (1989), TMX emerged as a phenomenon of interest since “most role-making research and most research on work teams has neglected peer group social exchange dynamics” (Seers, Petty, & Cashman, 1995, p. 20). The theoretical foundations and the evolution of the TMX literature is fairly consistent with that of LMX research, beginning with a role-theory approach and followed by an emphasis on social exchanges. However, in contrast to the vertical relationship between a leader and a subordinate (i.e., spanning different levels within an organization’s hierarchy), TMX focuses an individual’s exchange relationship to their workgroup (as a unit). That is, an employee’s TMX quality assesses the reciprocal relationship between a member and his/her team, with respect to (a) an individual’s contribution of ideas, feedback, and assistance to other members and, in turn, (b) the individual’s receipt of information, help, and recognition from other team members.

Although TMX was conceived to be somewhat analogous to the LMX construct developed by Graen and Cashman (1975), it is important to identify the similarity and differences between the two. First, both constructs are based on the logic that relationships, rather than formal job roles, are the building blocks of organizational structure (Banks et al., 2014; Graen, 1976; Seers, et al., 1995). Both constructs focus on the reciprocity between parties in an exchange relationship, rather than on attributes or behavioral styles of either party to the relationship. In both cases, reciprocity must be analyzed in terms of the resources each party may bring to bear on the exchange process. However, the LMX construct was designed to jointly address employee role making and supervisory leadership, whereas the TMX construct was conceptualized to jointly address employee role making and work team dynamics. More specifically, TMX is not dyadic (as LMX is).

To date, empirical studies have demonstrated the importance of team-member exchange for a variety of psychological and work-related outcomes. For example, TMX has been found to be positively associated with self-efficacy (Liao, Liu, & Loi, 2010) and psychological empowerment (Liden, Wayne, & Sparrowe, 2000) in the workplace. In addition, studies have demonstrated the positive relationship that TMX has with work engagement (Liao, Yang, Wang, Drown, & Shi, 2013), job satisfaction (Liden, et al., 2000; Major, Kozlowski, Chao, & Gardner, 1995), organizational commitment (Liden, et al., 2000; Major, et al., 1995), creativity (Liao, et al., 2010), and task performance (Farh, Lanaj, & Ilies, 2017; Liden, et al., 2000). Indeed, a recent meta-analysis of the TMX literature found that these results are generally consistent across the existing studies in this domain (Banks, et al., 2014).

Similar to the seemingly ubiquitous beneficial effects high-quality LMX, research also suggests that TMX is generally beneficial for work outcomes. In addition to examining the meta-

analytic relationships within the TMX literature, Banks, et al. (2014) also conducted a comparison of the incremental predictive validity between LMX and TMX. The authors' results indicate that TMX explained significant amounts of variance, over and above LMX, when predicting organizational commitment and job satisfaction. However, TMX did not add predictive value, over and above LMX, when it came to job performance and turnover intentions. These results suggest that TMX seems to play a critical role in some instances, but not others.

Ironically, research on team-member exchange also makes a similar tenuous assumption that parallels a critical issue in the LMX differentiation literature previously discussed. Specifically, TMX is conceptualized as a focal employee's aggregated perception of *all* exchanges a member has within the workgroup. This assumes that an employee's interactions with *all* coworkers are equivalent in strength, content, and quality. For example, if an employee has a high-quality TMX relationship, then it is assumed that s/he has a high-quality relationship with *all* members of the same work unit. Such aggregation may, in fact, be necessary to establish the identity of a group as a meaningful "team" in the eyes of its members or to give meaning to the members' roles within that group (Seers, 1989). Members expect to receive internally consistent role messages from other team members and must respond in an internally consistent fashion to those role messages to establish identifiable roles within a team (Banks, et al., 2014; Seers, et al., 1995). Thus, reciprocal exchanged between a member and all members of the team serve reinforces the identity of each member as part of a team.

However, this assumption is similarly made in the LMX differentiation literature and assumes that individuals perceive, interpret, and react to the same situation (e.g., differential treatment by the leader) in the same way. By making such an assumption allows researchers to justify aggregating work interactions into a single score to capture the construct. However, this is

assumption is weak at best, as prior studies that have examined work interactions have found that there is meaningful variability in how two parties interpret the same relationship (e.g., Matta, Scott, Koopman, & Conlon, 2015; Sin, Nahrgang, & Morgeson, 2009). For example, Takeuchi, Yun, and Wong (2011) found that different coworkers can impact a focal employee in different ways, at least when it comes to similarity in work attitudes. Results from their study indicate that differences in each coworker's exchange ideology, which refers to an individual's belief that their effort at work is contingent upon the treatment they receive from the organization (Eisenberger, Huntington, Hutchison, & Sowa, 1986), importantly influences how LMX is related to task performance.

Summary. Taken together, the extant literatures on leader-member exchange and team-member exchange generally conclude that both exhibit positive relationships with various work outcomes. However, an important critical issue (and a potential area of opportunity) is the lack of theorizing and empirical examination of each of these constructs at a relational level. That is, a focal individual may perceive, interpret, and react to differences in LMX relationships in distinct ways across each their interactions with others. Ironically, the original formulation of the vertical-dyad linkage (VDL) (Dansereau, et al., 1975; Liden & Graen, 1980) emerged as a response to the assumption that a leader's behaviors towards subordinates are both homogenous and consistent over time. Similarly, LMX differentiation research needs to move beyond the assumption that LMX differences influence subordinates in homogeneous and consistent ways. By relaxing this assumption can open up additional avenues of inquiry into the importance of relational variability, providing a more nuanced understanding of interpersonal relationships and behaviors in organizations.

Therefore, to address the issues in the existing literature, this dissertation will develop a conceptual model using a relational approach to investigate how differences in LMX relationships can influence discretionary work behaviors. That is, I argue that there are meaningful differences in how a focal employee compares their own LMX status to a specific referent coworker in predicting peer-to-peer interpersonal behaviors. This perspective overcomes the weakly held assumptions that differentiation exerts the same influence on all individuals in a workgroup and that the behavioral responses towards each coworker (as a result of differentiation) is consistent across *all* of an employee's interactions.

Having reviewed the extant research on leader-member exchange and LMX differentiation, as well as discussed the critical issues that emerged from my review, the following sections introduce power-approach theory (Keltner, Gruenfeld, & Anderson, 2003) as an overarching theoretical perspective that informs the conceptual model I develop in this dissertation. Specifically, power-approach theory provides an ideal theoretical lens to understand how differences in LMX relationships can influence interpersonal behaviors at the relational level because (a) the foundations of LMX research explicitly argue that effective leaders to differentiate their work relationships with subordinates (Graen, Novak, et al., 1982; Graen, 1976), (b) differentiation serves as a mechanism for establishing an informal hierarchy within a leader's workgroup (Erdogan & Liden, 2002), and (c) power-approach theory explicitly considers the relational nature of social interactions and delineates how a sense of power can influence an individual's behaviors towards others.

THEORETICAL BACKGROUND: POWER-APPROACH THEORY

“Power is to the organization as oxygen is to breathing.”

Clegg, Courpasson, and Phillips (2006, p.3)

Defining Social Power

Power has long been a phenomenon of interest to organizational researchers and practitioners. Traditional approaches to the study of power have generally taken a structural perspective that views power as a function of one's formal position within an organizational hierarchy (Blau, 1964; Blau & Scott, 1962; Emerson, 1962; Thibaut & Kelley, 1959). This perspective defines power as asymmetrical control of valued resources (e.g., money, information, decision-making authority), which often comes with having a relative positional advantage over others. Although power in organizations can be derived from formal institutional roles (Weber, 1947), power can also exist in the absence of formal roles (e.g., within informal groups). For example, French and Raven (1959) presented a typology of social power that included sources not only closely linked to formal roles in an organizational hierarchy (i.e., legitimate, reward, and coercive power), but also sources that may not necessarily depend on formal separation between hierarchical roles (i.e., expert and referent power). This has led researchers to argue that power is not simply control derived solely from one's structural position within a hierarchy (Anderson, John, & Keltner, 2012; Magee & Galinsky, 2008). This realization has sparked a recent burgeoning interest in understanding the psychological experience of power and its consequences.

More recently, social hierarchy researchers have embraced the perspective that power can also be construed as a psychological state. From this perspective, scholars have argued that power is not necessarily aligned with the structural position or rank a person holds within an

organization's hierarchy. Instead, power can be defined as an individual's capacity to influence others within their social relationships (Anderson, et al., 2012; Keltner, et al., 2003). For example, research on parent-children relationships have shown that although parents control resources (e.g., food, safety, comfort) and make decisions that are critical to children, many parents often feel "powerless" and lack the ability to influence their children's behaviors (Bugental & Lewis, 1999). Similarly, within organizational research, managers often hold a positional advantage that affords them influence over others and access to valued resources. Yet, some managers still lack a sense of power in their relationships with subordinates, leading to ineffective tactics that undermine effective functioning in their work units (Anderson & Brion, 2014). For example, studies have shown that technical specialists have considerable power in an organization, despite the subordinate roles they often occupy (e.g., Barley, 1996). Moreover, research on workgroups that lack formal leaders have shown that individual's with higher cognitive ability or certain personality traits (e.g., extraversion and authoritarian personality) often rise into an informal position of influence (Ensari, Riggio, Christian, & Carslaw, 2011; Taggar & Neubert, 2004), despite not being given formal power.

These findings suggest two important points that are critical for understanding the psychological experience of power. First, power is not only dependent on one's formal position, but can also be construed as a subjective judgement regarding their capacity to influence others (Anderson, et al., 2012; Keltner, et al., 2003; Magee & Galinsky, 2008). In other words, an individual's sense of power represents an internal mental model of their relative ability to influence others within a social context (Anderson & Galinsky, 2006; Tost, 2015). Sometimes an elevated sense of power can overlap with one's position in an organization, however it is not necessarily dependent on the formal hierarchy (Anderson, Srivastava, Beer, Spataro, & Chatman,

2006; Fast & Chen, 2009). Second, a person's belief about their relative power can determine their capacity to exert influence on other individuals. That is, those who perceive themselves as powerful often behave in ways that are distinct from those who feel powerless, regardless of the actual position one occupies in a relationship.

For this dissertation, to understand how differences in LMX relationships can influence an employee's workplace interactions, I follow the social-psychological approach in viewing power as a psychological state. That is, an individual's *sense of power* refers to "the perception of one's ability to influence another person or other people" (Anderson, et al., 2012, p. 316). More importantly, this perspective is consistent with LMX research in that a leader can have multiple subordinates that are not formally differentiated based upon their roles in the organizational hierarchy. Instead, through the role-taking and role-making process (Graen, 1976; Graen & Cashman, 1975), leaders create an informal rank ordering within their workgroups based on the unique relationship they form with each subordinate.

Differences in Existing Approaches to the Study of Power

In this dissertation, I consider how perceptions of hierarchical work relationships (i.e., leader-member exchange) are related to interpersonal behaviors in workgroups. One of the key departures from existing organizational research on power is the use of a social-psychology perspective, opposed to an industrial-organization psychology approach, to understand how power influences interpersonal dynamics. As such, it is important to discuss the differences between the two here. The majority of prior research on power in organizations has relied upon French and Raven's (1959) seminal framework, which outlined several potential sources of social power and elucidated how (a) the effects of one basis of power influences other bases of power (Carson, Carson, & Roe, 1993; French & Raven, 1959) and (b) the bases of power can be

leveraged to influence others (at this point in time, research on social influence was focused on conformity; e.g., Asch, 1956; Asch, 1955). Despite the enduring popularity of French and Raven's (1959) seminal framework on power, Podsakoff and Schriesheim (1985) presented a critical review of this literature that noted (a) the lack of a theoretical rationale to guide scholars in their research questions and (b) a lack of consistent empirical findings regarding the relationships that bases of social power have on work outcomes.

In contrast, the recent burgeoning interest on psychological power, grounded in a social-psychology approach, moves beyond the limitations discussed above that has reduced the focus of scholarly interest on French and Raven's (1959) bases of power approach since the 1990s. First, theoretical developments grounded in a psychological power approach have been built upon carefully designed experiments that allow researchers to draw causal inferences about the relationships between psychological power and outcomes of interest to social-psychology researchers. This has led to the development of Keltner and colleague's (2003) seminal theory on psychological power (discussed in the next section) that outlines a number of testable hypotheses, thereby providing a theoretical framework for which research and theory development on psychological power can be built upon.

Second, the social-psychology approach to the study of power focuses on how the psychological experience of power influence's one's cognitive processes to predict behavioral outcomes. This is relevant to the study of LMX differences because much of the theory and research on LMX differentiation is built on the understanding that individuals make sense of their work context through observed social information that led to subjective comparisons about one's relative standing with the leader (Anand, et al., 2015; Buunk & Gibbons, 2007; Salancik & Pfeffer, 1978). In contrast, French and Raven's (1959) framework and French's (1956) theory of

social power focused on how one basis of power can lead to and reciprocally influence other bases of power (Podsakoff & Schriesheim, 1985). Additionally, studies in this vein of research have focused on understanding how bases of power can be used to influence others, whereas research on the psychological power seeks to unpack the processes how the experience of power leads a powerholder to behave towards others. Finally, unlike the criticisms of mixed empirical research based on French and Raven's influential framework (c.f. Podsakoff & Schriesheim, 1985), research on the psychology of power has largely found support for the core tenants of Keltner and colleague's (2003) power-approach theory.

Power-Approach Theory

As discussed previously, power-approach theory (Keltner, et al., 2003) provides an ideal theoretical lens to understand how differences in LMX relationships affects interpersonal behaviors at the relational-level for several important reasons. First, the theoretical underpinnings of LMX research (based on role theory and social exchange theory) delineate the importance of developing high-quality exchange relationships with some subordinates, but not others (Liden, et al., 1997). The differential treatment between members serves as a mechanism for establishing an informal hierarchy in the workgroup, with higher-quality LMX members receiving preferential treatment in the form of greater access to information, resources, and opportunities (Sparrowe & Liden, 1997). Second, power-approach theory was developed to address how power influences a person's cognitions and behaviors in social interactions. Because power is an inherently relational phenomenon, this suggests that a focal individual may have an elevated sense of power in one work relationship and, yet, have a reduced sense of power in a different work relationship.

According to power-approach theory (Keltner, et al., 2003), power can elicit differential affective and cognitive processes that influence a person's behavioral responses. The core proposition of Keltner, et al. (2003) theory is that the psychological experience of power activates a person's approach or inhibition systems, the behavioral systems associated with rewards or threats, respectively. Specifically, the behavioral approach system activates approach-related processes that helps an individual pursue and obtain goals related to rewards. On the other hand, the behavioral inhibition system has been equated to an alarm system within individuals. Once activated, the inhibition system triggers affective states such as anxiety, heightened vigilance for threats in the environment, avoidance, and response inhibition (Higgins, 1997).

Based on Keltner, et al. (2003), an elevated sense of power increases an individual's approach-related tendencies for two reasons. First, power grants an individual access to valued resources, leading to a sense of freedom to pursue one's goals without constraints. For example, powerful individuals live in environments with abundant resources, such as financial resources, food, physical comforts, beauty, and health as well as social resources, such as flattery, esteem, attraction, and praise. Second, the experience of power involves the awareness that one can act at will without interference or serious social consequences (Weber, 1947), triggering approach-related processes that help individuals pursue their own objectives and maintain their position of influence. These include affective states that motivate approach-related tendencies, cognitive assessments of reward contingencies in the environment, and forward locomotion in their behaviors towards others (Keltner, et al., 2003). Thus, power-approach theory argues that individuals with an elevated sense of power will have greater levels of approach-related affect, cognitions, and behaviors.

In contrast to an elevated sense of power activating the behavioral approach system, Keltner, et al. (2003) argued that a reduced sense of psychological power is associated with increased threat, punishment, and social constraints, thereby activating inhibition-related tendencies. The behavioral inhibition system triggers affective states such as anxiety, heightened vigilance, increased awareness of punishment contingencies, and avoidance (Anderson & Berdahl, 2002; Keltner, et al., 2003), all of which serve to inhibit one's responses relative to those who have an elevated sense of power. For example, at a societal-level, individuals who lack access to material, social, and cultural resources often feel powerless, making them more sensitive to the threats, punishments, and constraints in their surrounding environments (Fiske, 1993). At an individual-level, those with a reduced sense of power may fear the repercussions of speaking up due to the potential threat that their suggestions are interpreted the wrong way (Morrison, See, & Pan, 2015). Thus, research on the psychological experience of power suggests that people with reduced sense of power will have greater levels of inhibition-related affect, cognitions, and behaviors.

Supporting Empirical Evidence

Empirical evidence supports the general assertions proposed in Keltner and colleagues' (2003) power-approach theory. For example, Anderson, Keltner, and John (2003) sought to examine the convergence of emotions in relationship partners over time, leading to more rewarding interactions, increased relationship satisfaction, and the longevity of the relationship. The authors argued that partners with less power were more likely to conform to the emotions of the partner with elevated power. To test their predictions, Anderson, et al. (2003) conducted three separate studies (two longitudinal and one cross-sectional).

In Study 1, Anderson, et al. (2003) found that heterosexual partners in intimate relationships had similar emotional responses on three separate discussion tasks during their initial assessments. Six months after the initial assessment, the authors repeated the tasks and found that (a) partners' emotional responses became more similar over time and (b) emotional convergence was asymmetrical, such that the partner with less power in the relationship were more likely to become more similar to the partner with elevated power. Study 2 replicated these findings with same-sex partners in non-romantic relationships (e.g., roommates). Specifically, initial assessments did not suggest that partners were emotionally similar at the start of their relationship. However, over the course of one year, their emotional responses became significantly similar and the moderating effects of power were also replicated. These findings provide suggestive evidence that low-power partners were more likely to react to relational constraints and conform towards the emotional responses of partners with high power.

In a separate study, Whitson et al. (2013) directly tested the theoretical assertion from power-approach theory (Keltner, et al., 2003), suggesting that elevated power increases one's attention towards potential gains leading to greater action by the powerful. In Study 1, using the power priming manipulation from Galinsky, Gruenfeld, and Magee (2003), the authors assigned participants into high- or low-power conditions. The participants were then asked to complete a planning task and the researchers provided participants with goal facilitating and goal constraining information. Participants rated each piece of information on the extent that it would make it easier or harder to achieve their task. Upon completion, participants were asked to recall as many statements as possible. Results of their analyses suggested that participants primed to feel low power recalled more goal-constraining statements, however they found no effect for goal-facilitating statements.

In Study 2, Whitson, et al. (2013) used the same power manipulation and asked participants to complete a fairy-tale completion task (Gollwitzer, Heckhausen, & Steller, 1990) and coded the extent participant stories focused on obstacles to goal completion (i.e., goal constraint) or progress to goal completion (i.e., goal facilitation). Results from Study 2 showed significant differences between high- and low-power conditions. Specifically, participants primed with a high sense of power (a) generated less goal-constraining information in their narratives and (b) were more likely to write endings that ended in successful goal completion, relative to those in the low-power condition. These findings support the notion that power drives goal completion through the reduction of goal-constraining obstacles.

Extending the literature's understanding of the psychological experience of power, Galinsky, Magee, Inesi, and Gruenfeld (2006) predicted that power diminishes perspective taking in individuals. The authors argued that the powerful are (a) less reliant on accurate information from others, (b) have greater demands on their attention, and (c) are more rigid in their self-concept and can resist the identities that others attempt to impose on them. Through three studies, Galinsky, et al. (2006) tested these predictions using various approaches. Study 1 primed individuals to feel a sense of high- or low-power and found that those in the high-power condition were more likely draw an "E" on their forehead in a self-oriented direction, which the authors concluded as evidence of a reduced inclination to consider the visual perspective of others.

In Study 2, the Galinsky, et al. (2006) primed power and asked participants to take a third-party perspective to interpret how a prewritten message would be interpreted by a friend of the speaker. The message itself was designed to sound sincere, but knowledge about the speaker suggests that the speaker may have been sarcastic. The authors found that participants primed to

experience high-power were more likely to perceive the message as sarcastic, and concluded that individuals' experiencing an elevated sense of power were more likely to anchor on their own vantage point opposed to that of the message receiver.

Finally, Study 3 used a series of pictures with men and women expressing different emotions and asked participants to select which emotion was being displayed, after being primed into high- or low-power conditions. Results from this experiment demonstrated that participants in the high-power condition made more errors in determining the correct emotional expression, suggesting that elevated power decreases an individual's ability to accurately assess the emotional expressions of others. Overall, the authors concluded that their findings provide evidence suggesting an elevated sense of power reduces one's ability consider how others see, think, and feel.

In a separate study, Anderson and Galinsky (2006) explored the implications of power-approach theory (Keltner, et al., 2003) by examining the effects of power on perceptions of risk and risky behaviors. Based on the theory, the authors argued that elevated power increases one's (a) optimism towards potential outcomes, and (b) attention to the potential payoffs associated with risky behaviors. In addition, one's attention to the potential risks of their behaviors would be reduced. Across five separate studies, Anderson and Galinsky (2006) primed power in a variety of ways and used various operationalizations of optimism, perceptions of risk, and individual preferences towards risky behaviors.

Study 1 used a correlational design to assess the relationship between elevated power and perceptions of risk. Participants responded to Anderson and colleague's (2012) *sense of power* measure and rated their own chances of experiencing 15 different life events (ranging from extremely unlikely to extremely likely). Results from Study 1 supported the authors' predictions

that individuals who reported an elevated sense of power had more optimistic perceptions of their own futures. In Study 2, Anderson and Galinsky (2006) used a correlational design to assess the relationship between sense of power and risk perceptions by asking respondents to estimate the number of deaths per year in the United States due to various extreme events (e.g., tornadoes, plane crashes, lung cancer). Their results showed that participants who scored higher on sense of power estimated a lower number of deaths than those who were lower on sense of power.

Study 3 of Anderson and Galinsky's (2006) study crossed power (high, neutral, low) with information framing (gains vs. losses) to examine how power was related to an individual's preferences for risk. The authors' primed power implicitly using a word fragment task and then asked participants to complete an adapted version of the Asian Disease scenario (Tversky & Kahneman, 1981). Results from this study showed that participants primed with high-power preferred the riskier solution, which the authors concluded as evidence that activating a sense of power drives one to engage in more risk-seeking behaviors. In Study 4, the authors primed power (high vs. low conditions) and examined the extent that participants were more or less likely to engage in unprotected sex. After reading a "risky behavior" vignette, respondents rated their likelihood of having sex without a condom if they were the individual's described in the scenario. Results showed that participants in the high-power condition were more likely to engage in unprotected sex, which the authors concluded as evidence that an elevated sense of power leads to a greater likelihood of engaging in risky behaviors.

Finally, in Study 5, Anderson and Galinsky (2006) used a face-to-face negotiation task to examine the relationship between sense of power and risk-taking. The authors' assigned participants into pairs and manipulated the extent one individual was more or less dependent on

the other for valued resources. At the end of the task, participants responded to the sense of power scale and a measure for risk-taking. Results showed that (a) power (operationalized as high or low resource control) was the only factor related to an individual's sense of power and (b) sense of power predicted both risk perceptions and risky behaviors in dyadic negotiations. Taken together, the results from this study provide evidence that an elevated sense of power increases an individual's optimism towards risk, perceptions of risk, and propensity to engage in risky behaviors.

In a separate study using MBA students and two field samples, Ferguson, Ormiston, and Moon (2010) examined how differences in power influences one's reactions to poor performers in organizations. Based on power-approach theory (Keltner, et al., 2003), the authors argued that managers with a reduced sense of power would be less likely to confront and train low performing employees. Moreover, these managers would be more likely to compensate for poor performers by taking over their duties and avoid interactions with them all together. In Studies 1 and 2, the authors asked participants to read a vignette about a poor performer on their team and manipulated power by assigning participants to either a team leader, peer, or subordinate role. Respondents were asked to indicate how they would respond to the poor performer (i.e., train, confront, compensate, and reject) after reading a fictitious scenario. Results from Study 1 showed that high-power individuals were more likely to train poor performers (argued to be an approach-related behavior) and that low-power individuals were more likely compensate or reject poor performers (argued to be an inhibition-related response). Results from Study 2 demonstrated a similar pattern of findings and extended the findings from Study 1 by examining whether a poor performer's emotional response (anger and sadness) would moderate these

relationships. However, the results of emotional response as a moderator were inconsistent and marginal at best.

In Study 3, Ferguson, et al. (2010) asked participants to recall a past incident where they had with a low performing coworker and indicate (a) their response to that individual's behaviors and (b) their sense of power over the individual. Results from this study showed that an elevated sense of power was associated with an inclination to confront or train low performers, whereas participants with a reduced sense of power were more likely to take on poor performers' responsibilities. Taken together, these findings provide evidence that elevated power (through manipulating one's structural role or their sense of power) can lead an individual to engage in more approach-oriented behaviors and reduced power increases the likelihood of inhibition-related responses to low performing individuals.

In a multimethod study (one experiment and two field samples), Morrison, et al. (2015) leveraged Keltner, et al. (2003) power-approach theory to examine how an employee's personal sense of power would inhibit their tendency to speak up or stay silent at work. Specifically, the authors argued that (a) an elevated sense of power would be negatively related to silence (an inhibition-related behavior) and (b) the relationship would be weakened by the perceived target's openness. Study 1 primed power using Anderson and Galinsky's (2006) power recall task and asked participants to complete a dyadic tower-building activity using Tinker Toys. The authors provided specific guidelines that each tower had to meet and, through the use of a confederate, ensured that these guidelines were not met by each participant. Results from Study 1 supported the authors' hypotheses, suggesting that a reduced sense of power was related to a greater likelihood of remaining silent and the negative effect was weakened when their partner's openness was high. Study 2 (healthcare worker sample) and Study 3 (diverse online panel)

replicated these findings using a one-time correlational survey design. The results of this study suggest that individuals experiencing an elevated sense of power were more likely to speak up with suggestions (an approach-oriented behavior), whereas individuals experiencing a reduced sense of power are more prone to remaining silent (an inhibition-related behavior).

Finally, Fast, Burris, and Bartel (2014) examined why some individuals higher in the formal organizational hierarchy displayed a strong aversion towards improvement-oriented input from subordinates. Specifically, the authors argued that (a) managers with low self-efficacy would be less likely to solicit voice from subordinates and (b) subordinates would be less likely to speak up to managers with low self-efficacy. Using a sample of 148 employees and 41 managers from a large multinational oil and gas company, the authors found support for these predictions. Results indicated that managers who have lower self-efficacy in their own managerial capabilities were more averse to suggestions from subordinates and that these subordinates were less likely to engage in voice behaviors towards their managers.

In a follow-up experiment (Study 2), Fast, et al. (2014) found evidence suggesting that managers with a low sense of self-efficacy would perceive employee voice as a threat to their ego. That is, despite having formal authority, some managers still reported a sense of power in their work relationships with subordinates, which inhibited them from acting upon employee voice. These findings provide indirect evidence supporting the arguments that (a) structural power is not necessarily aligned with the psychological experience of power and (b) managers with a reduced sense of power in their work relationships with subordinates act in more inhibited ways.

Summary of Power-Approach Theory

In summary, Keltner and colleagues' (2003) power-approach theory suggests that power will elicit differential cognitive processes that vary for those who experience an elevated or reduced sense of power in their relationships with others. The exemplar studies highlighted above provide support for the general tenants of power-approach theory, demonstrating that an elevated sense of power is associated with more approach-related tendencies, whereas reduced power is associated with more inhibition-related tendencies. Having described power-approach theory, I turn towards developing the hypotheses in this dissertation based on this theoretical perspective.

HYPOTHESIS DEVELOPMENT:

LMX DIFFERENCES AND SENSE OF POWER IN PEER RELATIONSHIPS

As previously discussed, past research on LMX relationships has consistently demonstrated the positive effects of high-quality LMX relationships for employee outcomes (Dulebohn, et al., 2012; Gerstner & Day, 1997; Ilies, et al., 2007; Martin, et al., 2016). The exchange quality that a leader develops with different subordinates serves as an indication of each individual's relative standing with the leader (Erdogan & Liden, 2002; Henderson, et al., 2009). That is, differences in LMX relationships serve as an implicit indicator of each group member's position within a workgroup's hierarchy.

Specifically, individuals with a higher-quality LMX relationship have greater access to information, resources, and a leader's time and energy (Wayne & Ferris, 1990). Early research on LMX labeled these subordinates as "trusted assistants" of the leader, whose work relationships are characterized by mutual trust, respect, and reciprocity (Green & Liden, 1980). Individuals that have a lower-quality relationship with their leader are not afforded the same level of access to information, resources, and a leader's time and energy. These subordinates were often referred to as the "hired hands" within a workgroup, whose work relationships were characterized by more of a transactional relationship with the leader (Dansereau, et al., 1975). Thus, through the process of developing differentiated exchange relationships with subordinates, leaders enable a loose informal structure within their workgroup to emerge. Those who develop a higher-quality LMX relationship have greater influence within the workgroup, relative to those with a lower-quality LMX relationship (Erdogan & Liden, 2002).

In this dissertation, I approach differences in LMX relationships as an individual assessment of an employee's relative LMX standing in comparison with a specific referent

coworker in his or her workgroup. Specifically, I define *LMX social comparisons between peers* (LMXSCP) as the perceived differences in LMX quality between (a) the focal employee and (b) a specific referent coworker. The term ‘peers’ is used to delineate the level of LMX differentiation being studied, which is in contrast to existing studies that have approach differentiation at the individual- or workgroup-level. That is, I approach LMX differences as an individual perception that varies between each relationship an employee can have with other coworkers in the same workgroup. By doing so, I am able to relax the assumption that employees perceive, interpret, and react to differences in LMX in similar ways, allowing for a more nuanced examination of the process through which LMX differences can influence an employee’s behaviors towards each referent coworker.

This approach assumes that work relationships (such as leader-member exchange relationships) have no objective metric to assess its quality. Instead, based on the observations and interactions of a leader with other coworkers, an employee obtains social information about their own LMX standing within the workgroup (Vidyardhi, et al., 2010). This perspective is supported by prior studies that have found evidence suggesting that differences LMX quality are readily observable and salient to employees (Sherony & Green, 2002; Sias & Jablin, 1995; Tse, et al., 2013). Subsequently, an employee subjectively interprets their own relative standing to each referent coworker through social comparison processes (Buunk & Gibbons, 2007). Thus, this dissertation not only avoids the weakly held assumptions present in the existing literature, but also enables an examination into the theoretically meaningful variability that differentiation can have on employee behaviors towards other coworkers.

Integrating theory research on social hierarchy and consistent with existing LMX research, I argue that the differences in LMX relationships creates an informal rank ordering

between group members. Because, power is inherently relational in nature, an individual's sense of power consists of one's relative LMX standing in comparison to each referent coworker within their workgroup. Indeed, Erdogan and Liden (2002) noted that in the context of workgroups, "high LMX employee have the status of being 'trusted assistants' of the leader" (p. 94) and have more influence relative to low-quality LMX employees. Combining these arguments from the LMX literature with research on the psychology of power, this suggests that a focal employee who has a higher LMX quality (relative to a referent coworker) will experience an elevated sense of power in that specific work relationship. In contrast, an individual with a lower-quality LMX relationship (relative to a referent coworker) will experience a reduced sense of power in that specific work relationship.

A number of empirical studies provide indirect evidence for my assertions. For example, Volmer, Spurk, and Niessen (2012) used social exchange theory as a framework to study the relationships between leader-member exchange quality, job autonomy, and creative work involvement. Using a sample from a large high-technology firm in Germany, the authors reported a moderate relationship between LMX quality and job autonomy, suggesting that employees report greater freedom to make decisions as their LMX quality increases. In addition, the authors found evidence that job autonomy strengthened the positive relationship between LMX quality and creative work involvement. These findings indirectly support the theoretical assertions of power-approach theory (Keltner, et al., 2003) that suggests an elevated sense of power leads to greater approach-related tendencies because powerholders are relatively less constrained and perceive greater freedom to pursue task-related activities.

In a separate study, Aryee and Chen (2006) studied leader-member exchange in a Chinese context. The authors proposed that LMX quality would be (a) positively related to task

performance and job satisfaction, and (b) negatively related to withdrawal behaviors. These relationships would be mediated through psychological empowerment. Specifically, psychological empowerment is a multidimensional construct that captures an individual's task motivation (Spreitzer, 1995), for which two of these dimensions are self-determination (an individual's sense of having choice or initiating and regulating actions) and impact (the degree an individual can influence their work outcomes).

Using a sample consisting of 192 subordinates and 66 supervisors working in a Chinese household appliance manufacturer, Aryee and Chen (2006) found that LMX quality had (a) a positive relationship with psychological empowerment and (b) a negative relationship with withdrawal behaviors. The authors' mediation analyses supported a partially mediated model, such that the effects of LMX on withdrawal behaviors were transmitted through psychological empowerment. These results suggest that higher LMX quality is associated with greater perceptions of choice and autonomy (measured as dimensions within the broader psychological empowerment construct), both of which are theoretical and empirical correlates of experiencing an elevated sense of power. Additionally, if LMX quality serves as an informal rank ordering of subordinates, Aryee and Chen's (2006) findings that LMX was negatively associated with withdrawal behaviors provide indirect evidence that aligns with theoretical arguments (from power-approach theory) that a reduced sense of power will activate inhibition-related tendencies (Keltner, et al., 2003).

Finally, Scandura, et al. (1986) examined the relationships between LMX quality, job performance, and perceived decision influence. Specifically, the authors proposed that a subordinate's influence on workgroup decisions would be predicted by an interaction between LMX quality and individual performance. Using a sample of 58 matched supervisor-subordinate

dyads in a manufacturing facility, the authors reported a positive correlation between LMX quality and decision influence. In addition, results from their regression analyses suggest that the positive relationship remained, even after accounting for the interaction effects between LMX quality and performance. For high-quality LMX members, decision influence remained consistently high, regardless of individual performance. However, for low-quality LMX members, individual performance served as a substitute for high-quality LMX, such that decision influence increased significantly when performance was high. These findings provide direct evidence of the relationship between LMX quality and perceptions of influence, which is congruent with contemporary research on psychological power that defines a sense of power as one's capacity to influence others (Anderson, et al., 2012).

Taken together, these exemplar studies provide suggestive evidence consistent with my theoretical rationale based on Keltner and colleagues' (2003) power-approach theory and support my predictions of a positive relationship between LMX differences and sense of power in work relationships. Specifically, I hypothesize that:

Hypothesis 1: LMX differences between a focal employee and a referent coworker will be positively related to the focal employee's sense of power.

Neutralizing Effects of Task Interdependence

Task interdependence broadly refers to the extent that workgroup members need to collaborate, coordinate, or interact to complete their assigned tasks (Kiggundu, 1983; Pearce & Gregersen, 1991; Thompson, 1967). Indeed, task interdependence between individuals occupying various roles is a fundamental and defining feature of workgroups and teams (Ilgen, et al., 2005; Kozlowski & Bell, 2003). However, the concept of interdependence requires further specification for understanding how LMX differences influences work relationships.

Historically, scholars have conceptualized task interdependence in a number of ways. Thompson's (1967) classic framework delineates three types of interdependence that increase in complexity: pooled, sequential, and reciprocal. Specifically, *pooled interdependence* exists when group output is the sum of individual output, such that tasks do not require direct interactions between members. *Sequential interdependence* occurs exists when group output depends upon accomplishing tasks in a prescribed order, such that each member's tasks is only directly connected to specific coworkers and in a specific order. *Reciprocal interdependence* exists when group output requires mutual coordination between certain sub-groups (but not all members). Finally, Saavedra, Earley, and Van Dyne (1993) extended this framework to include *team interdependence*, which exists when group output requires simultaneous mutual coordination between all members, such that one member's output can serve as another's input without a predetermined order (Saavedra, et al., 1993; van de Ven, Delbecq, & Koenig, 1976).

Although past research has differentiated between various forms of task interdependence, Courtright, Thurgood, Stewart, and Pierotti (2015) argued that these forms of interdependence are conceptually-related and should be combined for the sake of parsimony. The authors proposed an integrative definition that defines task interdependence as "the degree to which taskwork is designed so that members depend upon one another for access to critical resources and create workflows that require coordinated action" (p. 1829). This conceptualization suggests that interdependence may be viewed along a continuum, such that when task interdependence is lower (e.g., pooled interdependence), group members are able to accomplish their tasks relatively independently, whereas when task interdependence is higher (e.g., team interdependence), members are more reliant on others in the workgroup to complete their tasks. Most importantly, this approach allows task interdependence to vary across workgroup contexts.

In this dissertation, I follow Courtright and colleague's (2015) integrative definition of task interdependence and extend this to consider how LMX differences are related to sense of power at the relational level. This is critical because, as with LMX differentiation research at the workgroup-level, conceptualizing task interdependence as a property of the workgroup assumes that all individuals are *equally* interdependent with one another. This approach does not allow for variability in the extent that a focal employee is interdependent with each referent coworker. In other words, the degree that LMX differences is related to a focal employee's sense of power in dyadic relationships depends on the extent that each coworker pair is required to mutually coordinate their efforts towards achieving individual tasks. As the degree of task interdependence increases, an individual becomes more reliant on their coworker to accomplish his or her work tasks (Courtright, et al., 2015; Kiggundu, 1983), regardless of either party's relationship with the leader.

The increased reliance on information and coordination between two group members will reduce the relative influence a higher-quality LMX individual has over a coworker with a lower-quality LMX. In other words, regardless of which individual (the focal employee or the referent coworker) is receiving a greater allocation of time, energy, or other resources from the leader (Liden, et al., 1997; Wayne & Ferris, 1990), both partners are reliant on one another to achieve a joint outcome. For example, the structure and nature of work tasks may require a focal employee with a high-quality LMX relationship to interact with one that has a relatively lower LMX quality with the leader. Although the focal individual may have greater access to the resources and informational benefits from the leader, the lower-LMX counterpart may hold vital information that may be necessary for accomplishing the focal employee's tasks. Therefore, as

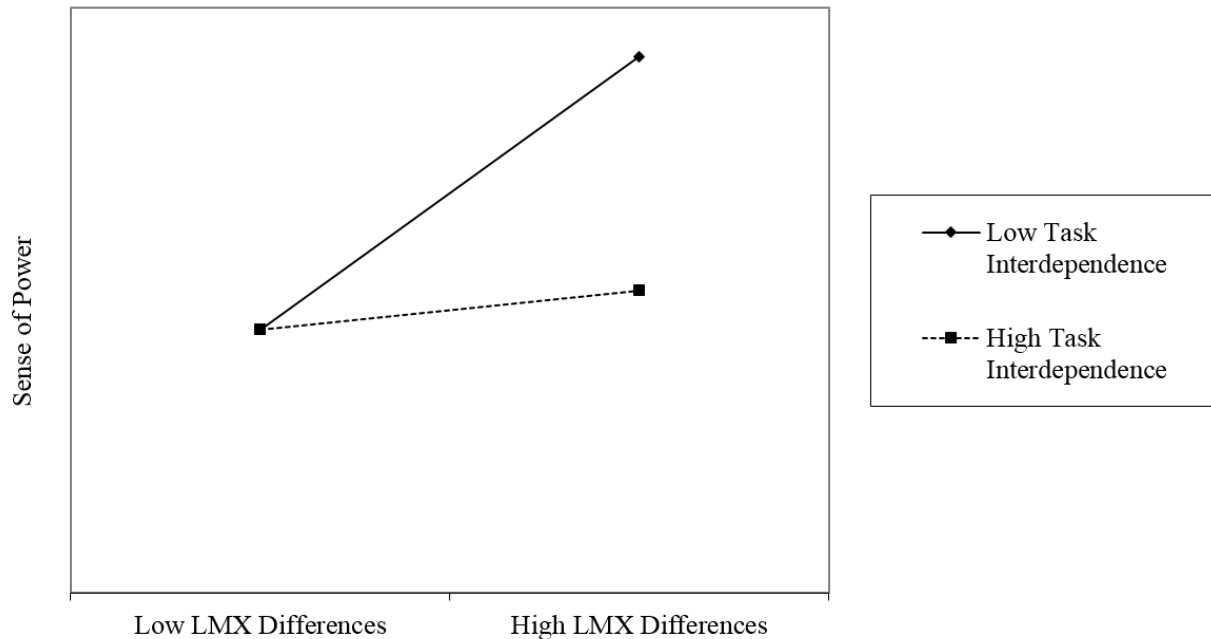
an employee's dependence on a coworker for task-related information or activities increases, their ability to exert unilateral influence in that particular work relationship will diminish.

Consistent with these arguments, prior studies provide evidence in support of my predictions. For example, Franz (1998) leverage exchange theories to examine how task interdependence is related to personal sense of power in teams. Specifically, the authors argued that an individual's sense of power would increase or decrease, depending on the interdependence that an employee has with other coworkers. Using a sample of 2,274 individuals working in 224 corporate R&D teams, the authors found that mutual interdependence between team members was negatively related to an employee's sense of power. The authors suggested that these effects occur because under conditions of mutual interdependence, relationship partners were more likely to view themselves as equals. These findings provide direct evidence suggesting that interdependence between a focal employee and a referent coworker will diminish an individual's sense of power in their work relationship.

Combining my theoretical arguments with the evidence from prior research, I predict that the positive relationship between LMX differences and sense of power (between a focal employee and a referent coworker) will be moderated by the level of interdependence between the two individuals. More specifically, I propose a neutralizing effect such that high levels of interdependence will attenuate the positive relationship between LMX differences and a focal employee's sense of power. The proposed interaction is shown in Figure 2 below.

Hypothesis 2: Task interdependence will moderate the positive relationship between LMX differences and the focal employee's sense of power, such that higher interdependence will weaken the relationship and lower interdependence will strengthen the relationship.

Figure 2 – Proposed Interaction Effects of Task Interdependence on the Positive Relationship between LMX Differences and Sense of Power



Having discussed the underlying rationale that links LMXSCP differences to the psychological literature on power, the next section builds upon the core elements of power-approach theory (Keltner, et al., 2003) and elucidates how a focal employee's sense of power in their work relationships can influence discretionary interpersonal work behaviors. This is followed by a final sub-section that integrates the hypotheses in my conceptual model together.

HYPOTHESIS DEVELOPMENT:

SENSE OF POWER AND INTERPERSONAL RELATIONSHIPS

Going beyond the predictions of how LMX differences can influence one's sense of power, I extend research and theory on LMX differentiation by considering the implications of sense of power on interpersonal discretionary behaviors towards other coworkers. This is important to consider because power is inherently relational in nature (Anderson & Brion, 2014; Anderson, et al., 2012; Emerson, 1962) and individuals behave in distinct ways based on their sense of power across each relationship (Farmer & Aguinis, 2005; Galinsky, et al., 2006; Keltner, et al., 2003).

In this dissertation, I have taken a psychological power approach to examine differences in LMX relationships, suggesting that perceived differences in LMX quality between a focal employee and a referent coworker will affect the focal employee's sense of power in their work relationship. Power-approach theory posits that an elevated sense of psychological power is associated with a heightened tendency to engage in approach-related behaviors (Anderson & Berdahl, 2002; Keltner, et al., 2003). Based on this perspective, I argue that discretionary interpersonal work behaviors represent a behavioral manifestation of approach-related tendencies that are triggered by an elevated sense of power. This is aligned with research on discretionary work behaviors that has delineated the differences between active (approach-oriented) and passive (inhibition-oriented) behaviors at work (e.g., Ferris, Yan, Lim, Chen, & Fatimah, 2016). However, whether a sense of power leads to helpful (e.g., citizenship) or harmful (e.g., counterproductive) discretionary work behaviors across each relationship an employee has with others remains relatively unknown.

In the following sections, I expand upon my rationale for focusing on each type of discretionary work behavior and develop predictions regarding the conditions that an elevated sense of power will lead an employee to engage in either helpful or harmful behaviors towards another coworker.

Discretionary Interpersonal Work Behaviors

For this dissertation, I focus specifically on two forms of discretionary interpersonal work behaviors – interpersonal citizenship and counterproductive behaviors – for three reasons. First, discretionary interpersonal behaviors are volitional actions that serve as a vital social exchange mechanisms to aid other employees and the organization in accomplishing their goals (Organ, 1988; Podsakoff, Ahearne, & MacKenzie, 1997). Second, an individual can develop distinct work relationships with each of their coworkers, and both interpersonal citizenship and counterproductive behaviors can be directed at a *specific* referent coworker. This allows for a more precise prediction of how social exchange relationships are related to employee behaviors (Cropanzano, Anthony, et al., 2017). Third, interpersonal citizenship and counterproductive behaviors both represent approach-related behavior – one is beneficial and the other is detrimental to the other individual. Based on extant theory and research on the psychological experience of power, the following sections elucidate when an elevated sense of power will be related to each form of discretionary interpersonal work behavior.

Sense of Power and Interpersonal Citizenship Behaviors

Organizational citizenship behaviors are broadly defined as discretionary behaviors that are not explicit in the formal job description, but contribute towards the effectiveness of the organization (Organ, 1988; Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Interpersonal citizenship behaviors (OCB-I) refer to citizenship behaviors that are directed at and intended to

benefit other individuals at work, opposed to citizenship behaviors that are intended to benefit the organization. Interpersonal citizenship behaviors can serve as a viable means for coordination between employees in organizations (Podsakoff, et al., 1997) and have been found to increase performance and productivity for individuals and their workgroups (Nielsen, Hrivnak, & Shaw, 2009; Podsakoff, Whiting, Podsakoff, & Blume, 2009). Examples of interpersonal citizenship behaviors include assisting a coworker with work-related tasks and listening to a coworker's problems (Settoon & Mossholder, 2002; Williams & Anderson, 1991).

According to power-approach theory (Keltner, et al., 2003), an elevated sense of power increases an individual's approach-related tendencies, and interpersonal citizenship represents a behavioral manifestation of these tendencies. However, engaging in discretionary behaviors can be costly for an employee, as doing some may divert time and energy from more important work activities (Tjosvold, 1985). For example, Bergeron (2007) used a resource allocation framework to develop a theoretical model to explain the potential costs of organizational citizenship. Specifically, the author argued that existing reward systems are designed around task performance. However, employees are limited in the resources at their disposal, predominantly one's time to dedicate towards different work activities. Therefore, expending effort on non-role prescribed activities may have an unintentional negative consequence for an employee. These arguments suggest that there are potential tradeoffs of engaging in citizenship behaviors that an individual must consider when deciding how to best allocate their own time and energy at work.

In a follow on study, Bergeron, Shipp, Rosen, and Furst (2013) examined the differences in how task performance and citizenship behaviors affect career outcomes. Specifically, the authors predicted that in organizations with an outcome-based reward system (i.e., established policies and procedures that monitor, direct, evaluate, and compensate employees based on

outcomes; Eisenhardt, 1985; Ouchi, 1979), the time an employee spends on citizenship behaviors carried less weight in formal performance evaluations than time spent on task-related activities. Additionally, citizenship behaviors were predicted to have a negative relationship with career outcomes (e.g., salary increases, promotions). Using an archival dataset consisting of 3,680 full-time employees in a professional consulting firm, the authors tested these predictions.

Results from Bergeron and colleague's (2013) study demonstrated that time spent on citizenship behaviors and task-related activities were both positively related to subjective assessments of performance. However, time spent on task-related activities was a far better predictor of formal performance evaluations (standardized beta coefficients were over 5 times larger than the coefficient for citizenship behaviors). In addition, time spent on citizenship behaviors was negatively related to time spent on work tasks, providing evidence that employees face tradeoffs between engaging in citizenship or task-related activities. Task-related activities had a significant positive relationship with employee salary increases and career advancement, whereas citizenship behaviors had a significant negative relationship with both objective outcomes. Taken together, these findings provide evidence of the unintentional negative consequences associated with engaging in citizenship behaviors. Integrating these findings within a power-approach framework suggests that an employee may not necessarily choose to engage in citizenship behaviors, despite the approach-oriented tendencies associated with an elevated sense of power.

According to power-approach theory (Keltner, et al., 2003), the extent that an elevated sense of power will lead an individual to engage in helpful behaviors towards others depends on an individual's motivation to help others (Anderson & Brion, 2014). Specifically, *prosocial motivation* refers to a person's innate desire to expend effort towards the well-being of others

and highlights the social aspects of workplace interactions by emphasizing one's concerns about how their actions can influence those around them (Batson, 1987; Grant, 2007, 2008a; Grant & Parker, 2009). An individual's prosocial motivation is generally viewed as a relatively enduring individual trait that is reflective of one's interpersonal sensitivity, helpfulness, and values concerning others (De Dreu, 2006; Graziano, Habashi, Sheese, & Tobin, 2007; Penner, Dovidio, Piliavin, & Schroeder, 2005).

Scholars have argued that individuals who are prosocially-oriented are more attuned to the perspectives of others, leading to an increased tendency to focus their actions on responding to the needs and interests of those around them (Clark & Mills, 1979; De Dreu, Weingart, & Kwon, 2000; Grant & Berry, 2011). In addition, organizational researchers have recognized that some individuals are able to provide assistance to others simply because they are in a better position to do so (Burke, Duncan, & Weir, 1976). That is, one's ability to access information or resources are able to assist others more easily. Thus, individuals who are prosocially motivated are more aware of the needs and interests of others and will respond to an elevated sense of power by acting in more socially responsibly, and not self-interested, ways (Chen, Lee-Chai, & Bargh, 2001; Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008; Howard, Gardner, & Thompson, 2007; van Dijk & De Cremer, 2006; Wisse & Rus, 2012).

Prior research provides support for these theoretical assertions. For example, Cote et al. (2011) developed a model to explain how power influences the relationship between prosocial orientation and empathic accuracy. Specifically, the authors argued that elevated power will free individuals to attend to their own motivational tendencies and for prosocially motivated individuals, this will lead to greater accuracy in identifying another individual's emotions

accurately. Across three studies using various research designs, Cote, et al. (2011) examined these predictions using both student and adult samples.

In Study 1, the authors designed a laboratory experiment that asked participants to write down an event that caused them emotional suffering in the past and share them with another participant. Using a physiological indicator of prosocial orientation established in past research (respiratory sinus arrhythmia; Beauchaine & Shaw, 2001; Porges, 2001) and self-reported measures of sense of power, experienced emotions, and perceptions of partner's emotions, the authors tested their predictions. Results from Study 1 provided initial evidence that elevated sense of power moderated the relationships between prosocial orientation and empathic accuracy, such that individuals with high prosocial orientation and a high sense of power were more able to accurately identify their partner's emotions.

Study 2 from Cote, et al. (2011) used an experimental design separating participants into high- and low-power conditions. Participants were asked to first complete an individual task, followed by a joint task with a partner, who was a confederate instructed to display specific emotions to the participant during the task. Results from this study replicated the effects from Study 1, providing further evidence for the causal effects that power and prosocial orientation has on empathic accuracy. Finally, Study 3 used a cross-sectional survey design to test these relationships in an adult sample (after establishing causality in the previous studies). To measure power, the authors used the jobs that each participants had and identified job descriptors using the Occupational Information Network (O*NET; Peterson et al., 2001) to code for the degree of power in each job. Results of regression analyses provided evidence that power and prosocial motivation interacted to predict empathic accuracy. Taken together, the findings from Cote and colleagues' (2011) study provide evidence that individuals who have elevated power and are

high on prosocial motivation are more likely to act in ways that attend to their prosocial tendencies, as reflected by their empathic accuracy of other's emotions.

Similarly, Schmid Mast, Jonas, and Hall (2009) examined how power leads to more interpersonal sensitivity and the possible moderators of these effects. Across four experimental studies, the authors explored their research question using various instruments to operationalize their constructs. Study 1 assigned participants to high- or low-power positions and asked them to watch a pre-recorded video of an actor displaying specific emotions. Participants were asked to report how they interpreted the actor's thoughts and feelings, which was later coded for interpersonal sensitivity by the research team. Results suggested that individuals assigned to the high-power condition were higher on interpersonal sensitivity than those assigned to the low-power condition. In Study 2, participants completed the same task as in the prior study. However, instead of manipulating the roles of participants, the researchers used an implicit power manipulation (word completion task) to prime a sense of power. Results from their analyses replicated the findings from Study 1, demonstrating that regardless of whether power was primed as a formal position or implicitly, the results were consistent.

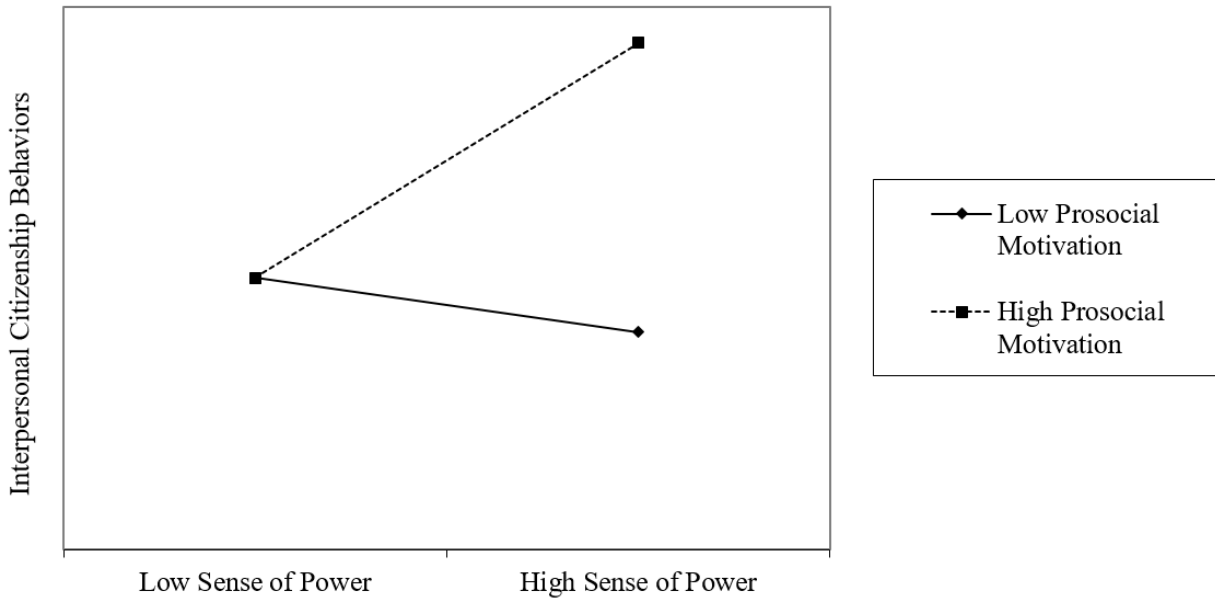
In Study 3, Schmid Mast, et al. (2009) used a power recall task (Anderson & Galinsky, 2006) to manipulate sense of power and captured interpersonal sensitivity using an emotion recognition task that asks participants to rate facial expressions in a variety of pictures. The authors found that individuals in the high-power condition were more interpersonally sensitive than both the control condition (recall task without priming high or low power) and the low-power condition. Finally, Study 4 focused on examining the possible factors that would moderate the relationship between feeling powerful and interpersonal sensitivity. The authors presented a scenario where participants were asked to take the perspective of a leader in an organization and

manipulated the type of leader in the scenario (egoistic, empathic, or neutral). Results from this study showed that interpersonal sensitivity was more pronounced when participants adopted an empathic style of leadership, compared to an egoistic one. These findings provide further evidence that elevated power can lead to a greater focus on the welfare of others, and the effects were strongest for those that were more empathically oriented.

Combining the above conceptual arguments and empirical findings, I predict that the relationship between a focal employee's sense of power and interpersonal citizenship behaviors towards a referent coworker will be contingent upon the focal employee's prosocial motivation.. The proposed interaction is shown in Figure 3 below.

Hypothesis 3: Prosocial motivation will moderate the relationship between a focal employee's sense of power and interpersonal citizenship behaviors, such that higher prosocial motivation will strengthen the relationship and lower prosocial motivation will weaken the relationship.

Figure 3 – Proposed Interaction Effects of Prosocial Motivation on the Relationship between Sense of Power and Interpersonal Citizenship Behaviors



Sense of Power and Counterproductive Work Behaviors

Counterproductive work behaviors are defined as discretionary behaviors intended to have a harmful effect on an organization and its members (Fox, Spector, & Miles, 2001; Robinson & Bennett, 1995). Interpersonal counterproductive behaviors (CWB-I) refer to behaviors that are directed at and intended to harm a specific individual at work (Fox, et al., 2001). Examples of interpersonal counterproductive behaviors include uncivil or aggressive behaviors, such as verbal abuse, gossiping, and acting rudely towards others (Bennett & Robinson, 2000; Fox, et al., 2001; Robinson & Bennett, 1995). Most of the research in this domain have taken the perspective that CWBs are a behavioral responses to job stressors in the workplace (Fox & Spector, 1999; Fox, et al., 2001; Meier & Spector, 2013).

According to the job stress framework of CWBs, people monitor and appraise events in their surrounding work environment (Lazarus, 1991). Certain events that are perceived as threats

to one's well-being are argued to be job stressors that induce negative affective and cognitive responses in an employee (Spector, 1998). Based on this framework, strain is viewed as an outcome of the job stress process and counterproductive work behaviors represent a behavioral manifestation of work strain (Fox, et al., 2001). For example, research on CWBs have suggested that perceptions of control are an important determinant of counterproductive work behavior and when an employee perceives low control over situations at work, s/he will be more likely to react in nonconstructive ways in an attempt to gain a sense of control (Spector, 1986).

As discussed previously, research and theory on the psychology of power suggests that an elevated sense of power is associated with more approach-related tendencies (Keltner, et al., 2003) that (a) directs an individual's attention and efforts towards achieving their goals (Anderson & Brion, 2014; Guinote, 2007) and (b) reduces the saliency of constraints towards goal attainment (Smith & Bargh, 2008; Whitson, et al., 2013). In addition, the extent that an elevated sense of power will orient one's behaviors towards benefiting others may depend on an individual's motivation to benefit others (i.e., prosocial motivation). It is important to note that this does not imply that an individual who is egoistically motivated (i.e., focused on their own self-interests) will necessarily seek to *actively* harm others. In other words, an employee who is more self-focused may simply choose to not exert extra effort (beyond the formal job description) to help other coworkers.

However, an individual with an elevated sense of power may also act upon their approach-related tendencies in other ways. Research on the psychology power suggests that individuals often respond to threats to their power in ineffective ways, such as engaging in risky, demeaning, and unethical behaviors (Cho & Fast, 2012; Fast & Chen, 2009; Joosten, van Dijke, Hiel, & De Cremer, 2014). This is because individuals who have power are motivated to retain

their advantageous position of influence (Fehr, Herz, & Wilkening, 2013; Sturm & Antonakis, 2015; Williams, 2014). Research on the psychology of power suggests that self-efficacy is a critical determinant of whether an individual with an elevated sense of power acts in counterproductive ways towards others. This assertion is grounded in the notion that power increases one's need to be competent, in order to legitimize their higher rank over others and maintain their position of influence (Georgesens & Harris, 2006; Kernis, Gannemann, & Barclay, 1989). Thus, power holders who feel incompetent are more likely to engage in harmful behaviors towards others, due to their insecurities driven by ego defensiveness.

Prior research provides support for these theoretical assertions. For example, Maner and Mead (2010) argued that stability in a social hierarchy allows a leader to prioritize the goals of others over securing their own power, whereas instability signals a threat to a leader's influence, leading to decisions and actions aimed at protecting their power. Across five experimental studies, the authors found evidence suggesting that some leaders were more focused on protecting their own advantageous position of influence. Participants were assigned to leadership positions randomly, however participants in the leadership condition were told that they scored the highest on their leadership assessment. Instability was manipulated by telling participants that the leadership position could be reassigned, based on individual performance. Results from Maner and Mead's (2010) study demonstrated that instability in a group's hierarchy was a key determinant of whether leaders engaged in more selfish and exploitative behaviors, whereas leaders in more stable hierarchies promoted collective goals over their own self-interests. These findings provide indirect evidence that suggests when competence is a determinant of one's position of power, individuals who hold power are more likely to exploit their informational advantages in an attempt maintain their position.

In another study, Fast and Chen (2009) argued that individuals with power who perceive themselves as incompetent will act in aggressive ways towards others. Across four studies, the authors tested their hypothesis. Using various operationalizations of power (survey reports, priming sense of power, and manipulating structural power) and competence (self-reports and priming felt competence), the authors found consistent evidence that power interacted with incompetence to predict aggression. Specifically, individuals with high power and high incompetence lead to the most aggression, which was found to be driven by ego-defensiveness. These findings suggest that competence is a key boundary condition between power and aggressive behaviors.

In a separate study, Fast, et al. (2014) explored why some managers were averse to suggestions for improvement from subordinates. Building upon role theory (Biddle, 1986) and self-discrepancy theory (Higgins, 1987), the authors argued that managers with lower self-efficacy would be less likely to solicit input from subordinates and that subordinates whose manager were lower on self-efficacy would speak up less. Using a field sample of 148 employees and 41 managers in a large multinational oil and gas company, the authors tested these predictions. Results from Fast and colleagues' (2014) study demonstrated that managers with lower self-efficacy were less likely to solicit voice from their subordinates. To assess the causal nature of their proposed relationships, the authors conducted a follow-up experimental study that replicated the results from their field sample. In addition, the authors found evidence that participants in the low managerial self-efficacy condition were more likely to evaluate subordinates negatively. The authors concluded that their results provide evidence that individuals in a position of power (i.e., managerial role) who have lack self-efficacy are more

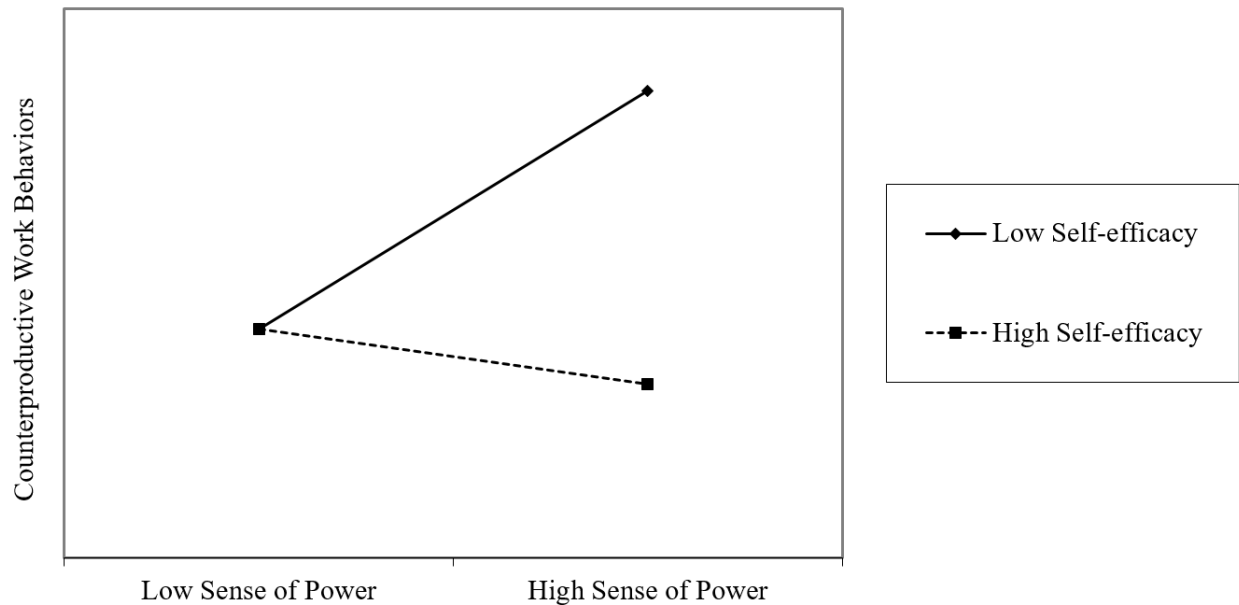
likely to view subordinate voice behaviors as a threat to their power, and react by denigrating the competence and worth of others.

Integrating research on psychological power and CWBs with leader-member exchange theory, I argue that a lack of self-efficacy serves as a stressor for individuals who have a relatively higher LMX-quality than another coworker. This is because a leaders develop higher-quality exchange relationships with subordinates that they believe are more capable, often assigning these members with more complex and difficult tasks (Liden, et al., 1997). Members who have a higher LMX (relative to a coworker) and low self-efficacy may feel a sense of threat to their position of influence, due to a lack of competence that may undermine their LMX-status. Based on power-approach theory, individuals with an elevated sense of power that perceive a threat to their position of influence will be more likely to act on their approach-related tendencies by engaging in aggressive and denigrating behaviors that undermine others.

Taken together, I predict that the positive relationship between a focal employee's sense of power and discretionary counterproductive work behaviors will be contingent upon an individual's self-efficacy at work. The proposed interactions are shown in Figure 4 below.

Hypothesis 4: Self-efficacy will moderate the relationship between a focal employee's sense of power and interpersonal counterproductive behaviors, such that lower self-efficacy will strengthen the relationship and higher self-efficacy will weaken the relationship.

Figure 4 – Proposed Interaction Effects of Self-Efficacy on the Relationship between Sense of Power and Interpersonal Counterproductive Behaviors



Integrative Hypotheses

Hypothesis 1 predicts that LMXSCP differences are positively related to a focal employee's sense of power in their work relationships. Hypothesis 3 and 4 suggest that the impact of an employee's sense of power on discretionary interpersonal work behaviors towards other coworkers (i.e., interpersonal citizenship and counterproductive work behaviors) will be contingent upon the employee's prosocial motivation and self-efficacy. These relationships are reflected in my overall theoretical model illustrated in Figure 1.

Researchers identify models of this configuration as a mediated-moderation model (Edwards & Lambert, 2007; Preacher, Rucker, & Hayes, 2007). Although Hypotheses 1 through Hypothesis 4 may be examined by testing the significance of individual paths, research suggests that this approach may not be sufficient for establishing mediation and mediated-moderation effects. My proposed conceptual model predicts that the effects of LMX differences on interpersonal behaviors towards coworkers will be mediated through the interactive effects of a

focal employee's sense of power in their work relationships and (a) prosocial motivation and (b) self-efficacy. Thus, my theoretical model implies two second-stage mediated-moderation relationships that form the final hypotheses for this dissertation:

Hypothesis 5: The relationship between LMXSCP differences and interpersonal-citizenship behaviors will be mediated through the interactive effects of a focal employee's sense of power and prosocial motivation.

Hypothesis 6: The relationship between LMXSCP differences and counterproductive work behaviors will be mediated through the interactive effects of a focal employee's sense of power and self-efficacy.

METHODS

Sample and Procedure

Data for this dissertation was collected using a snowball sampling procedure where employees that are in a supervisory role were contacted and recruited to participate in a research study by completing an online signup survey. Work units were limited to those that interacted face-to-face (opposed to those that only interact virtually), as the saliency and richness of social information can be substantially diminished in a virtual context (Miles & Hollenbeck, 2014; Schaubroeck & Yu, 2017). Importantly, my sampling strategy allows my proposed model to be tested using data from a broad range of occupations and industries, thereby mitigating possible issues that may arise from collecting data from a single industry or work context. In the signup survey, employees who occupied a supervisory role were asked to provide contact information for the employees within his or her work unit.

To identify employees that occupied a supervisory role, I use several methods. First, I coordinated with the MBA office at a large mid-western university to obtain a panel of recent participants and graduates from their programs. Second, current students enrolled in management courses at a large western university were offered a nominal amount of extra credit in their course for providing contact information for full-time employees that they knew. The third process for identifying supervisors relied on a panel of full-time employees who have previously participated in a similar research study and a panel of alumni from on-campus student organizations at a large western university. A total of 52 individuals working in a supervisory role and completed the signup survey, providing contact information for 249 employees (i.e., the ‘focal employees’). These individuals were then contacted directly and recruited to participate in this study via email. Each participant received two questionnaires separated by approximately a

two-week period, allowing for sufficient time lag between responses to ensure temporal separation between the dependent variable and predictors, as well as reducing respondent fatigue that may lead to careless responding from participants. All participants were informed that their responses would remain strictly confidential and would only be used for academic research purposes. At the conclusion of the study, participants were offered an honorarium of \$20 for their participation as a token of appreciation.

In total, 179 employees (71.9%) reported on 710 coworker relationships. After matching supervisor, employee, and coworker data over both survey time points (predictors and outcomes are from different sources), the final sample consisted of 147 employees (Level-2) and 552 relationships (Level-1). Focal employees had, on average, 3.9 coworker relationships. Of these focal employees, 37.4% were female, the average age was 32.4 years, and the average job tenure was 5.4 years. In terms of ethnicity, 62.6% were Caucasian, 19.1% were Asian, 8.8% were Pacific Islander, 4.8% were Hispanic/Latino(a), and 1.4% were African American. In terms of the highest level of education attained, 4.8% had a high school diploma or equivalent, 27.9% had an associate's degree or some college completed, 43.5% had a bachelor's degree, and 23.8% had a graduate or professional degree.

For focal employees, the first survey included round-robin items that asked participants to rate all of their coworkers for measures of relational constructs. This included measures for LMX social comparisons, task interdependence, and sense of power. Additionally, I captured individual differences between focal employees, including measures for their LMX quality with their supervisor, the five-factor model of personality, and general demographic variables (age, gender, ethnicity, job tenure). The second survey asked focal employees to rate their interpersonal behaviors (citizenship and counterproductive) towards each coworker, as well as

the second stage moderators in my conceptual model (prosocial motivation and work-based efficacy). In addition, I included several individual-level attitudinal outcomes, including affective commitment, job satisfaction, and turnover intentions to draw comparisons between my proposed approach to studying LMX differences and the current approaches in the literature.

To measure potential contextual differences between the work units in this study, supervisors were asked to provide ratings for their perceived LMX relationship quality with focal employees, employees' task performance behaviors, descriptive indices of their team characteristics (authority differentiation, skill differentiation, and temporal stability, and ratings of viability and performance for the overall work unit.

Measures for Focal Constructs in Theoretical Model

Each of the measures used in this dissertation are from established scales in the literature. Because the focal variables in this dissertation focuses on uncovering the variability within a focal employee's work relationships with specific referent coworkers, I adapted existing measures by shifting the referent in scale items from general perceptions to specific coworkers. The Appendix presents each of the measures used in detail.

LMX social comparisons between peers (LMXSCP). To measure LMX differences between a focal employee and a referent coworker, I adapted five items ($\alpha = .88$) from Vidyarthi, et al. (2010) LMX social comparison measure. Specifically, the original items referenced a comparison to the workgroup in general, which was adapted to each referent coworker. For example, the original item "Relative to the others in my workgroup, I receive more support from my manager" was adapted to "Relative to _____, I receive more support from my manager", such that the space was filled with each referent coworker's name. It should also be noted that the published measure includes six items, however one item ("When my manager cannot make it

to an important meeting, it is likely that s/he will ask me to fill in”) did not reference a comparison target and was not included in this study. Subordinates responded to each item on a 7-point scale using the same anchors from Vidyarathi, et al. (2010), which ranged from 1 = *strongly disagree* to 7 = *strongly agree*.

Task interdependence. To measure the extent that a focal employee and referent coworker are reciprocally interdependent, I adapted three items ($\alpha = .87$) from Pearce and Gregersen (1991) reciprocal interdependence measure. Specifically, the original items referenced a comparison to others in general, which was adapted to each referent coworker. For example, the original item “I frequently coordinate my efforts with others to accomplish my work” was adapted to “I frequently coordinate my efforts with _____ to accomplish my work”, such that the space was filled with each referent coworker’s name. Subordinates responded to each item on a 7-point scale using the same anchors from Pearce and Gregersen (1991), which ranged from 1 = *strongly disagree* to 7 = *strongly agree*.

Sense of power. To measure a focal employee’s sense of power in their work relationship with a referent coworker, I adapted three items ($\alpha = .76$) from Anderson, et al. (2012) sense of power measure. A sample item included is “In my interactions with _____, I can get him/her to do what I want”, such that the space was filled with each referent coworker’s name. Subordinates responded to each item on a 7-point scale using the same anchors from Anderson, et al. (2012), which ranged from 1 = *strongly disagree* to 7 = *strongly agree*.

Prosocial motivation. To measure prosocial motivation, I used the four items ($\alpha = .92$) from Grant (2008a). All items begin with the stem “Why are you motivated to do your work?” A sample item included is “Because I care about benefiting others through my work.” Subordinates

responded to each item on a 7-point scale using the same anchors from Grant (2008a), which ranged from 1 = *strongly disagree* to 7 = *strongly agree*.

Work-based efficacy. To measure work-based efficacy, I adapted four items ($\alpha = .90$) from Chen, Gully, and Eden (2001). A sample item included is “I am confident that I can perform any tasks assigned to me at work.” Subordinates responded to each item on a 7-point scale using the same anchors from Chen, Gully, et al. (2001), which ranged from 1 = *strongly disagree* to 7 = *strongly agree*.

Interpersonal citizenship behaviors. To measure interpersonal citizenship behaviors, I adapted four items ($\alpha = .93$) from Settoon and Mossholder (2002). Because each employee would be rating all items for *each* referent coworker, I selected the four items with the highest factor loadings and adapt them to each referent coworker. For example, the original item “Takes on extra responsibilities in order to help coworkers when things get demanding at work” was adapted to “_____ takes on extra responsibilities to help me when things get demanding at work”, such that the space was filled with each referent coworker’s name. Subordinates responded to each item on a 7-point scale ranging from 1 = *Never* to 7 = *Always*.

Interpersonal counterproductive work behaviors. To measure interpersonal counterproductive work behaviors, I adapted four items ($\alpha = .89$) from Ferris, et al. (2016) and adapted them to each referent coworker. Participants read instructions that stated “Indicate the extent that _____ engages in the following behaviors to you at work”, such that the space was filled with each referent coworker’s name. A sample item includes “acts rudely towards me at work.” Subordinates responded to each item on a 7-point scale ranging from 1 = *Never* to 7 = *Always*.

Measures for Comparison and Control

In addition to the measures for focal constructs outlined above, I also measured several additional variables to assess the robustness of any statistically significant findings in my analyses. These measures are outlined below.

Social comparison. To account for the extent that focal employees engaged in social comparisons with a referent coworker, I adapted a single item from Brown, Ferris, Heller, and Keeping (2007): “I compare the work relationship I have with my supervisor to the work relationship that _____ has with our supervisor”, such that the space was filled with each referent coworker’s name. Subordinates responded to each item on a 7-point scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Leader-member exchange (LMX). To measure the LMX quality between a supervisor and subordinate, I used seven items ($\alpha = .83$) from Liden, Wayne, and Stilwell (1993). Subordinates responded to all items on a 7-point scale. The first item asks participants “How would you describe your work relationship with your supervisor?” with scale anchors ranging from 1 = *very ineffective* to 7 = *very effective*. The remaining six items used scale anchors ranging from 1 = *strongly disagree* to 7 = *strongly agree*. A sample item included is “My supervisor recognizes my potential.” For supervisors, I adapted each of the items to reference each subordinate. For example, the sample items above were adapted to “How would you describe your work relationship with _____?” and “I think that I recognize _____’s potential at work”, such that the space was filled with each referent coworker’s name.

LMX social comparison (LMXSC). To measure LMXSC, I used the six items ($\alpha = .88$) from Vidyarthi, et al. (2010). A sample item included is “I have a better relationship with my manager than most others in my workgroup.” Subordinates responded to each item on a 7-point

scale using the same anchors from Vidyarthi, et al. (2010), ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Affective commitment. To measure affective commitment, I adapted four items ($\alpha = .77$) from Allen and Meyer (1990). A sample item included is “I feel a strong sense of belongingness to my organization” Subordinates responded to each item on a 7-point scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Job satisfaction. To measure job satisfaction, I adapted three items ($\alpha = .71$) from Brayfield and Rothe (1951). A sample item included is “Overall, I am satisfied with my job.” Subordinates responded to each item on a 7-point scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Turnover intentions. To measure turnover intentions, I used three items ($\alpha = .83$) from Kelloway, Gottlieb, and Barham (1999). A sample item included is “I am planning to look for a new job.” Subordinates responded to each item on a 7-point scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Task performance. To measure task performance, I adapted three items ($\alpha = .74$) from Griffin, Neal, and Parker (2007) to reference each subordinate. For example, the original item “Carries out the core parts of your job well” was adapted to “_____ carries out the core parts of his/her job well”, such that the space was filled with each subordinate’s name. Supervisors responded to each item on a 7-point scale ranging from 1 = *Never* to 7 = *Always*.

Extraversion. To measure extraversion, I used five items ($\alpha = .91$) from the International Personality Item Pool (Goldberg et al., 2006). Participants were instructed to rate how accurately each statement describes them. A sample item included is “I feel comfortable around people.”

Subordinates responded to each item on a 7-point scale ranging from 1 = *very inaccurately* to 7 = *very accurately*.

Agreeableness. To measure agreeableness, I used five items ($\alpha = .81$) from the International Personality Item Pool (Goldberg, et al., 2006). Participants were instructed to rate how accurately each statement describes them. A sample item included is “I am on good terms with nearly everyone.” Subordinates responded to each item on a 7-point scale ranging from 1 = *very inaccurately* to 7 = *very accurately*.

Conscientiousness. To measure conscientiousness, I used five items ($\alpha = .78$) from the International Personality Item Pool (Goldberg, et al., 2006). Participants were instructed to rate how accurately each statement describes them. A sample item included is “I pay attention to details.” Subordinates responded to each item on a 7-point scale ranging from 1 = *very inaccurately* to 7 = *very accurately*.

Emotional stability. To measure extraversion, I used five items ($\alpha = .74$) from the International Personality Item Pool (Goldberg, et al., 2006). Participants were instructed to rate how accurately each statement describes them. A sample item included is “I am not easily bothered by things.” Subordinates responded to each item on a 7-point scale ranging from 1 = *very inaccurately* to 7 = *very accurately*.

Openness. To measure extraversion, I used five items ($\alpha = .72$) from the International Personality Item Pool (Goldberg, et al., 2006). Participants were instructed to rate how accurately each statement describes them. A sample item included is “I love to think up new ways of doing things.” Subordinates responded to each item on a 7-point scale ranging from 1 = *very inaccurately* to 7 = *very accurately*.

Workgroup characteristics. To measure workgroup characteristics, I used the single-item scales from the Team Descriptive Index (TDI) short-form validated by Lee, Koopman, Hollenbeck, Wang, and Lanaj (2015). Supervisors rated each core characteristic (authority differentiation, skill differentiation, and temporal stability) on a 9-point Thurstone response scale with five descriptive anchors. It should be noted that the short-form version is strongly related to the multi-item scales that follow a Likert format in samples across various contexts (see Lee, et al., 2015). These measures can be found in the Appendix.

Team viability. To measure team viability, I adapted three items ($\alpha = .73$) from Marrone, Tesluk, and Carson (2007). A sample item included is “Most members of this workgroup would welcome the opportunity to work as a group again in the future.” Supervisors responded to each item on a 7-point scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Team performance. To measure team performance, I adapted four items ($\alpha = .82$) from Tsui, Pearce, Porter, and Tripoli (1997). A sample item included is “Overall, this workgroup performs well on their assigned tasks.” Supervisors responded to each item on a 7-point scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

Analytical Approach

The research design for this dissertation uses two primary levels of analysis: individual and relational. That is, the structure of the data will include non-independence of observations as multiple coworker relationships (Level-1) are nested within a focal employee (Level-2). When non-independence is not modeled, the co-variation of variables across levels can lead to errors in prediction if not properly accounted for (Hox, 2010; Raudenbush & Bryk, 2002; Snijders & Bosker, 2012). Thus, I test my hypotheses using multilevel modeling to account for the non-independence of observations using Mplus 7 (Muthén & Muthén, 2012). To remove the

variability in how different individuals perceive, interpret, and react to the social information within each of their work contexts, I group-mean centered Level-1 variables. This is aligned with existing recommendations for dealing with multilevel data in order to remove potential effects at different levels of analysis (Enders & Tofghi, 2007; Hofmann, Griffin, & Gavin, 2000).

It should be noted that the LMX social comparison between peers (LMXSCP) items are adapted to reference each coworker within a focal employee's workgroup, which warrants a further discussion of centering decisions in this dissertation. The decision to grand-mean or group-mean center variables is a common decision faced by researchers utilizing multilevel methods, which can yield statistically non-equivalent results (Hofmann & Gavin, 1998). However, there is no *statistically* correct choice in centering decisions, but instead these decisions should be driven by the research question (Dalal & Zickar, 2012; Hofmann & Gavin, 1998; Kreft, De Leeuw, & Aiken, 1995). Specifically, the measure for LMXSCP is designed as a direct perceptual measure that captures a focal employee's perception of his or her own LMX quality relative to a referent coworkers'. As such, the decision to empirically center LMXSCP scores within-individuals may be interpreted as 'relative, comparison score', which requires further explanation.

In the context of this dissertation, a value of zero from *grand mean-centering* represents the average LMXSCP score for all individuals in this sample. This would be ideal for answering the research question of how *employees in general* compare their LMX relationships with coworkers, and the subsequent effects on interpersonal discretionary behaviors. As such, a grand mean-centered variable contains variability at Level-1 and Level-2 (Dalal & Zickar, 2012), making it impossible to determine whether the effects of LMXSCP are driven by differences across how all employees draw comparisons or by the differences in how a focal employee

compares his or her LMX relationships with coworkers within the local environment. In contrast, a value of zero from *group-mean centering* represents the average LMXSCP score for each focal employee within his or her local environment. This would be ideal for answering the research question of how a *focal employee* compares his or her LMX relationships towards a referent coworker in the work unit. Thus, I believe that, for the purposes of this dissertation, group-mean centering is most appropriate for testing my proposed research questions.

RESULTS

Descriptive Statistics and Correlations

The means, standard deviations, and correlations for relational-level variables are provided in Table 1, the individual-level variables in Table 2, and the team-level variables in Table 3.

Table 1 – Relational-level Descriptive Statistics and Correlations

Variable	Mean	S.D.	1	2	3	4	5	6	7	8
1 LMXSCP	4.13	1.31	(.88)							
2 Task interdependence	4.02	1.36	-.01	(.87)						
3 Sense of power	4.16	1.50	.52*	.16*	(.76)					
4 Interpersonal citizenship ^a	3.81	1.55	.02	.13*	.02	(.93)				
5 Interpersonal CWBs ^a	2.26	1.24	.06	-.11*	.10*	-.40*	(.89)			
6 Interpersonal citizenship	4.27	4.41	-.01	.36*	.18*	.28*	-.12*	(.91)		
7 Interpersonal CWBs	1.94	0.99	.08 [†]	-.14*	.06	-.16*	.37*	-.34*	(.86)	
8 Social comparison	3.62	1.81	-.12*	.05	-.03	-.01	.12*	-.11*	.27*	-

Notes. N = 552; reliabilities on diagonal; ^acoworker-reported; [†] $p < .10$, * $p < .05$

Table 2 – Individual-level Descriptive Statistics and Correlations

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1 LMXSCP ¹	4.15	1.00	-									
2 LMXSCP _(sd) ¹	0.84	0.59	.14 [†]	-								
3 Task interdependence ¹	3.98	0.99	.06	-.09	-							
4 Sense of power ¹	4.13	1.16	.55*	-.06	.13	-						
5 Interpersonal citizenship ^{1a}	3.79	1.10	.08	-.06	.03	.01	-					
6 Interpersonal CWB ^{1a}	2.33	0.96	.11	.27*	-.16*	.14 [†]	-.46*	-				
7 Interpersonal citizenship ¹	4.29	1.05	.07	-.20*	.22*	.07	.37*	-.19*	-			
8 Interpersonal CWB ¹	1.97	0.83	-.03	.41*	-.16 [†]	.08	-.25*	.50*	-.38*	-		
9 Social comparison ¹	3.63	1.51	-.12	.35*	-.10	-.09	-.13	.26*	-.30*	.35*	-	
10 Leader-member exchange	4.84	1.18	.58*	-.01	.13	.27*	-.10	.04	.04	-.10	-.03	(.83)
11 LMX social comparison	3.87	1.33	.65*	.05	.04	.39*	.04	.11	-.01	.05	-.01	.62*
12 Prosocial motivation	4.97	1.25	.13	-.21*	.28*	.16*	.35*	-.37*	.47*	-.53*	-.35*	.11
13 Work-based efficacy	5.30	1.14	.25*	.14 [†]	.14 [†]	.35*	-.09	.15 [†]	.06	-.02	-.07	.31*
14 Affective commitment	4.74	1.18	.32*	-.20*	.17*	.28*	.36*	-.19*	.45*	-.38*	-.20*	.28*
15 Job satisfaction	4.47	1.11	.23*	-.15 [†]	.07	.39*	.10	-.10	.10	-.16 [†]	-.05	.26*
16 Turnover intentions	3.46	1.44	-.13	.10	-.07	-.15 [†]	-.08	.20*	.20*	.15 [†]	-.04	-.27*
17 Task performance ^b	4.37	0.91	.52*	-.13	.11	.29*	.22*	-.27*	.06	-.22*	-.03	.39*
18 Extraversion	4.50	1.35	.17*	-.20*	.11	.14 [†]	-.01	-.01	.07	-.19*	.09	.21*
19 Agreeableness	5.00	1.01	.04	-.16 [†]	.19*	-.01	.08	-.21*	.21*	-.37*	-.05	.14 [†]
20 Conscientiousness	4.78	1.03	.10	-.21*	.09	.15 [†]	.20*	-.35*	.12	-.30*	-.09	.06
21 Emotional stability	4.22	1.00	.12	.02	-.08	.15 [†]	-.22*	.32*	-.21*	.20*	.08	.19*
22 Openness	4.78	0.90	-.05	-.17*	.12	.02	.13	-.24*	.31*	-.20*	-.06	-.10

Notes. N = 147; reliabilities on diagonal; ¹aggregated from level-1; ^acoworker-reported; ^bsupervisor-reported

[†] $p < .10$, * $p < .05$

Table 2 (cont'd)

Variable	11	12	13	14	15	16	17	18	19	20	21	22
11 LMX social comparison	(.88)											
12 Prosocial motivation	.04	(.92)										
13 Work-based efficacy	.37*	.12	(.90)									
14 Affective commitment	.30*	.51*	.21*	(.77)								
15 Job satisfaction	.29*	.12	.33*	.38*	(.71)							
16 Turnover intentions	-.22*	-.13	-.26*	-.24*	-.41*	(.83)						
17 Task performance ^b	.53*	.24*	.22*	.34*	.10	-.22*	(.74)					
18 Extraversion	.24*	.23*	.32*	.26*	.18*	-.18*	.25*	(.91)				
19 Agreeableness	.08	.37*	.24*	.21*	.05	-.07	.20*	.58*	(.81)			
20 Conscientiousness	.09	.32*	.27*	.35*	.35*	-.24*	.20*	.17*	.16 [†]	(.78)		
21 Emotional stability	.17*	-.17*	.32*	-.03	.08	-.17*	-.02	.21*	.14 [†]	-.11	(.74)	
22 Openness	-.12	.32*	.04	.13	-.13	.10	.16 [†]	.14 [†]	.18*	.23*	-.33*	(.72)

Notes. N = 147; reliabilities on diagonal; ^bsupervisor-reported

[†] $p < .10$, * $p < .05$

Table 3 – Team-level Descriptive Statistics and Correlations

Variable	Mean	S.D.	1	2	3	4	5	6
1 Team size	5.00	1.55	(.88)					
2 Authority differentiation	6.37	1.74	-.22	(.87)				
3 Skill differentiation	4.95	1.36	-.11	-.41*	(.76)			
4 Temporal stability	5.73	1.52	.14	.30 [†]	.02	(.93)		
5 Team viability	4.75	1.07	.17	.10	-.14	.13	(.89)	
6 Team performance	4.91	1.10	.17	-.42*	.53*	.17	.41*	(.91)

Notes. N = 41; reliabilities on diagonal; [†] $p < .10$, * $p < .05$

Partitioning of Variance Within and Between Focal Employees

Prior to testing my hypotheses, I ran null models using multilevel modeling to examine the variability that exists at each level of analysis for LMXSCP, task interdependence, sense of power, interpersonal citizenship, and CWB. Table 4 shows the parameter estimates and variance components for all Level-1 variables. Specifically, 57.9% of the variance in LMXSCP, 62.8% of the variance in task interdependence, 56.4% of the variance in sense of power, 70.5% of the variance in interpersonal citizenship, and 61.8% of the variance in CWB was at the relational-level. This suggests that over half the variance in each of these constructs occurs at the relational-level.

Table 4 – Percentage of Within-person Variance for Relational-level Variables

Variable	Within-individual (e^2)	Between- individual (r^2)	% Variance within-individual
LMX-SC Peers	0.99	0.72	57.9
Task Interdependence	1.15	0.68	62.8
Sense of Power	1.27	0.98	56.4
Interpersonal Citizenship	1.70	0.71	70.5
Interpersonal CWB	0.97	0.60	61.8

Notes. N = 552; percentage of variance within-individuals computed as $e^2 / (e^2 + r^2)$.

Test of Hypotheses

Results of multilevel modeling testing Hypothesis 1 and 2 are presented in Table 5. Hypothesis 1 predicted that LMX differences is positively related to sense of power in a focal employee's relationship with each referent coworker. In support of Hypothesis 1, I found a significant positive relationship between LMXSCP and sense of power (Model 1: $\gamma = .56, p < .05$).

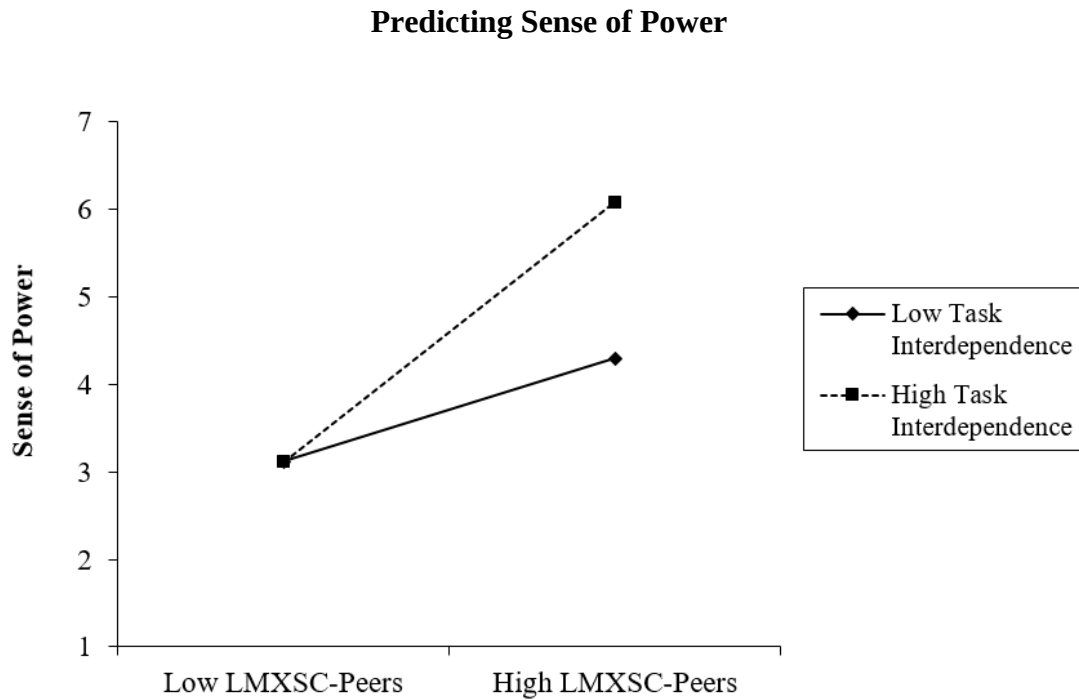
Table 5 – Results of Multilevel Modeling Predicting Sense of Power

Variable	Model 1		Model 2		Model 3		Model 4	
	γ	s.e.	γ	s.e.	γ	s.e.	γ	s.e.
LMXSCP	.56*	.07	.60*	.07	.61*	.07	.58*	.07
Task interdependence			.24*	.05	.24*	.05	.25*	.06
LMXSCP x task interdependence					.14*	.05	.15*	.05
Social comparisons							.04	.06
Intercept	4.14*	.10	4.14*	.10	4.15*	.10	4.14*	.10
R^2 (within individual)	25.20%		29.92%		32.28%		34.65%	
ΔR^2 (within individual)			4.72%		2.36%		2.36%	

Notes. N = 552; * $p < .05$

Hypothesis 2 predicted that task interdependence moderates the relationship between LMX differences and the focal employee's sense of power, such that higher interdependence will weaken the relationship and lower interdependence will strengthen the relationship. Prior to testing Hypothesis 2, I included task interdependence as a predictor of sense of power to account for the direct effects before assessing the interaction term. Results from my analyses showed a significant positive relationship between task interdependence and sense of power (Model 2: $\gamma = .24, p < .05$). The analyses also revealed a significant positive interaction between LMXSCP and task interdependence predicting sense of power (Model 3: $\gamma = .14, p < .05$), however the effects were opposite of my original hypotheses. Thus, Hypothesis 2 was not supported. Figure 5 displays the pattern of this interaction. The pattern of this relationship held when controlling for the extent a focal employee engaged in social comparisons with a referent coworker (Model 4: $\gamma = .15, p < .05$).

Figure 5 – Interaction between LMXSCP and Task Interdependence



Results of multilevel modeling testing Hypothesis 3 are presented in Table 6. Hypothesis 3 predicted that prosocial motivation moderates the relationship between a focal employee's sense of power and interpersonal citizenship behaviors, such that higher prosocial motivation will strengthen the relationship and lower prosocial motivation will weaken the relationship. In the first step, I modeled the direct effects of sense of power on interpersonal citizenship behavior. Results from my analysis showed a non-significant relationship between sense of power and interpersonal citizenship (Model 1: $\gamma = .07, p = .28$). In the second step, I entered prosocial motivation as simultaneous predictor of (a) interpersonal citizenship and (b) the slope of sense of power predicting interpersonal citizenship. The results did not support Hypothesis 3, as evident by the non-significant cross-level interaction (Model 2: $\gamma = .05, p = .31$).

**Table 6 – Results of Multilevel Modeling Predicting
Interpersonal Citizenship Behaviors**

	Model 1		Model 2	
Variable	γ	s.e.	γ	s.e.
<i>Level-1</i> (N = 552)				
Sense of power	.07	.07	.07	.06
<i>Level-2</i> (N = 147)				
Prosocial motivation			.30*	.07
Sense of power x prosocial motivation			.05	.05
Intercept	3.80*	.09	3.81*	.08
R^2 (within individual)	0.59%		5.29%	
ΔR^2 (within individual)			4.71%	
<i>Notes.</i> * $p < .05$				

Results of multilevel modeling testing Hypothesis 4 are presented in Table 7. Hypothesis 4 predicted that work-based efficacy moderates the relationship between a focal employee's sense of power and interpersonal CWB, such that lower work-based efficacy will strengthen the relationship and higher work-based efficacy will weaken the relationship. In the first step, I modeled the direct effects of sense of power on interpersonal CWB. Results from my analysis showed a non-significant relationship between sense of power and interpersonal citizenship (Model 1: $\gamma = .04$, $p = .31$). In the second step, I entered work-based efficacy as simultaneous predictor of (a) interpersonal CWB and (b) the slope of sense of power predicting interpersonal CWB. The results did not support Hypothesis 4, as evident by the non-significant cross-level interaction (Model 2: $\gamma = .05$, $p = .13$).

Table 8 presents the results of multilevel path analysis testing Hypothesis 5 and includes Hayes (2015) index of moderated mediation. Hypothesis 5 predicted that the relationship between LMX differences and interpersonal citizenship behaviors is mediated through the interactive effects of a focal employee's sense of power and prosocial motivation. The results

from multilevel path analysis did not support Hypothesis 5 (index of moderated mediation = .03, $p = .25$).

**Table 7 – Results of Multilevel Modeling Predicting
Interpersonal CWB**

Variable	Model 1		Model 2	
	γ	s.e.	γ	s.e.
<i>Level-1</i> (N = 552)				
Sense of power	.04	.04	.05	.04
<i>Level-2</i> (N = 147)				
Work-based efficacy			.13*	.06
Sense of power x work-based efficacy			.05	.04
Intercept	2.31*	.08	2.31*	.08
R^2 (within individual)	0.01%		1.03%	
ΔR^2 (within individual)			1.02%	

Notes. * $p < .05$

**Table 8 – Results of Multilevel Path Analyses Predicting
Interpersonal Citizenship**

Variable	$X \rightarrow M$		$M \rightarrow Y$	
	γ	s.e.	γ	s.e.
<i>Level-1</i> (N = 552)				
LMXSCP	.56*	.07	-.10	.07
Sense of power			.11	.07
<i>Level-2</i> (N = 147)				
Prosocial motivation			.30*	.07
Sense of power x prosocial motivation			.04	.05
Intercept			3.81*	.08
Index of Moderated Mediation			.03	.03
R^2 (within individual)			5.88%	

Notes. * $p < .05$

Table 9 presents the results of multilevel path analysis testing Hypothesis 6 and includes Hayes (2015) index of moderated mediation. Hypothesis 6 predicted that the relationship

between LMXSCP differences and counterproductive work behaviors will be mediated through the interactive effects of a focal employee's sense of power and self-efficacy. The results from multilevel path analysis did not support Hypothesis 6 (index of moderated mediation = .03, $p = .14$).

Table 9 – Results of Multilevel Path Analyses Predicting Interpersonal CWB

Variable	X → M		M → Y	
	γ	s.e.	γ	s.e.
<i>Level-1</i> (N = 552)				
LMXSCP	.56*	.07	-.02	.06
Sense of power			.06	.05
<i>Level-2</i> (N = 147)				
Work-based efficacy			.13*	.06
Sense of power x work-based efficacy			.05	.03
Intercept			2.31*	.08
Index of Moderated Mediation			.03	.02
R^2 (within individual)			1.03%	
<i>Notes.</i> * $p < .05$				

Supplemental Analyses

I conducted supplemental analyses to probe for potential issues that could have led to my unsupported hypotheses, as well as compare an LMXSCP approach to several additional constructs commonly investigated in organizational research.

Self-reported interpersonal behaviors. The purpose of using referent coworkers' reports of interpersonal behaviors about a focal employee was to avoid possible issues arising from common methods bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To relax this constraint, I tested Hypothesis 5 and 6 using a focal employee's self-reported interpersonal behaviors towards a referent coworker as dependent variables, opposed to each referent coworker's report of interpersonal behaviors from a focal employee.

Table 10 presents the results of multilevel path analysis testing Hypothesis 5 using self-reports of interpersonal citizenship. The results also did not support Hypothesis 5 (index of moderated mediation = .03, $p = .25$) when using self-reports of interpersonal citizenship.

Table 10 – Results of Multilevel Path Analyses Predicting Self-reported Interpersonal Citizenship

Variable	X → M		M → Y	
	γ	s.e.	γ	s.e.
<i>Level-1</i> (N = 552)				
LMXSCP	.56*	.07	-.40*	.08
Sense of power			.47*	.07
<i>Level-2</i> (N = 147)				
Prosocial motivation			.39*	.06
Sense of power x prosocial motivation			.05	.05
Intercept			4.30*	.08
Index of Moderated Mediation			.03	.03
R^2 (within individual)			41.18%	
<i>Notes.</i> * $p < .05$				

However, the results did reveal a significant positive relationship between a focal employee's sense of power and interpersonal citizenship ($\gamma = .47, p < .05$), suggesting that the relationship between LMXSCP and interpersonal citizenship is mediated through sense of power, regardless of a focal employee's level of prosocial motivation. A visual presentation of this model is presented in Figure 6. Table 11 decomposes the total effects that LMXSCP has on interpersonal citizenship ($\gamma = -.14, p = .08$), revealing that LMXSCP has both a significant direct negative effect on interpersonal citizenship ($\gamma = -.40, p < .05$) and a significant indirect positive effect mediated through sense of power ($\gamma = .26, p < .05$).

Figure 6 – Results of Multilevel Path Analyses Predicting Self-reported Interpersonal Citizenship

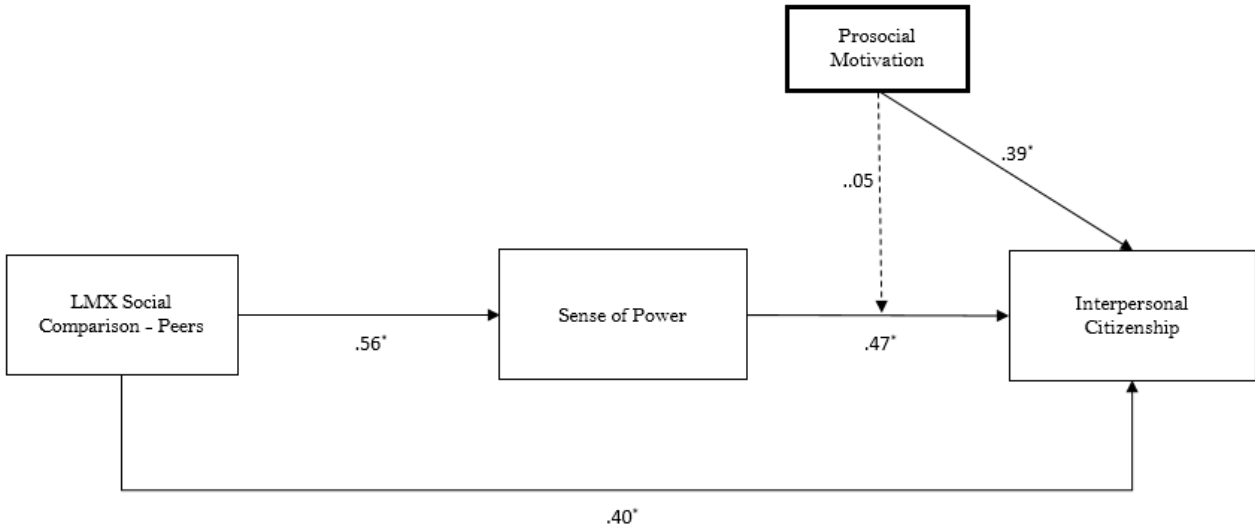


Table 11 – Effects Decomposition for Relationships between LMXSCP and Self-reported Interpersonal Citizenship

	γ	LCL 95%	UCL 95%
Indirect effects (via sense of power)	.26*	.21	.32
Direct effects	-.40*		
Total effects	-.14 [†]		

Notes. CI = confidence interval; LL = lower limit; UL = upper limit; Unstandardized coefficients are reported. Mediation is supported when the confidence interval excludes zero (20,000 bootstrap replications).

[†] $p < .10$, * $p < .05$

Table 12 presents the results of multilevel path analysis testing Hypothesis 6 using self-reports of interpersonal CWB. The results also did not support Hypothesis 7 (index of moderated mediation = -.01, $p = .50$) when using self-reports of interpersonal citizenship. Additionally, there was no evidence supporting a mediation effect of LMXSCP on interpersonal CWB through sense of power.

Table 12 – Results of Multilevel Path Analyses Predicting Self-reported Interpersonal CWB

Variable	X → M		M → Y	
	γ	s.e.	γ	s.e.
<i>Level-1</i> (N = 552)				
LMXSCP	.56*	.07	.22*	.05
Sense of power			-.06	.05
<i>Level-2</i> (N = 147)				
Work-based efficacy			-.02	.06
Sense of power x work-based efficacy			-.02	.03
Intercept			1.97*	.07
Index of Moderated Mediation			-.01	.02
R^2 (within individual)			29.79%	

Notes. * $p < .05$

Moderating effects of task interdependence. Based on the results from Table 11 that demonstrated a significant mediation effect of LMXSCP on interpersonal citizenship, via sense of power, I examined whether the moderating effects of task interdependence on the relationship between LMXSCP and sense of power would also carry through. Table 13 presents the results of multilevel path analysis, which provide support that the level of task interdependence between a focal employee and a referent coworker significantly affect the indirect relationship between LMXSCP and self-reported interpersonal citizenship (index of mediated moderation = .05, $p < .05$).

Following the recommendations of Preacher, Zyphur, and Zhang (2010), I used parametric bootstrapping procedures with 20,000 resamples to test the index of moderation (Hayes, 2015) and the estimated conditional indirect effects at four levels of task interdependence (+2, +1, -1, and -2 standard deviations). This approach uses parameter estimates from the analyses to estimate a sampling distribution to create a 95% biased-corrected confidence interval around the effects. These results are presented in Table 14 and suggest that

there are significant differences in the indirect effects of LMXSCP on interpersonal citizenship, via sense of power, moderated by task interdependence.

Table 13 – Results of Multilevel Path Analyses Predicting Self-reported Interpersonal Citizenship

Variable	X → M		M → Y	
	γ	s.e.	γ	s.e.
LMXSCP	.60*	.07	-.39*	.08
Task interdependence	.24*	.05		
LMXSCP x task interdependence	.11*	.03		
Sense of power			.48*	.07
Intercept			4.29*	.09
Index of Mediated Moderation			.05*	.02
R^2 (within individual)			20.17%	

Notes. N = 552; * $p < .05$

Table 14 – Bias-corrected Bootstrap Confidence Intervals

Level of Task Interdependence	Indirect effect	LL 95% CI	UL 95% CI
Index of moderation	.05	0.04	0.07
+2 SD	.39	0.28	0.50
+1 SD	.34	0.23	0.47
-1 SD	.24	0.15	0.34
-2 SD	.19	0.10	0.30

Notes: N = 552; CI = confidence interval; LL = lower limit; UL = upper limit; Unstandardized coefficients are reported. Mediation is supported when the confidence interval excludes zero (20,000 bootstrap replications).

Testing proposed conceptual model at individual level. I also conducted additional analyses to examine my proposed conceptual model all at the individual-level. All relational-level variables were aggregated to form a level-2 average. Table 15 presents the results of path analyses testing Hypothesis 5 at the individual-level of analysis. The results did not support

mediation or moderated mediation for the effects of LMXSCP on other-reported interpersonal citizenship.

Table 15 – Results of Path Analyses Predicting Other-reported Interpersonal Citizenship

Variable	X → M		M → Y	
	<i>b</i>	s.e.	<i>b</i>	s.e.
LMXSCP	.64*	.08	.11	.10
Sense of power			-.11	.09
Prosocial motivation			.32*	.07
Sense of power x prosocial motivation			.09	.06
Intercept			3.77*	.08

Notes. N = 147; * $p < .05$

Table 16 presents the results of path analysis testing Hypothesis 5 at the individual-level of analysis using self-reported interpersonal citizenship. I did find a marginally significant relationship for the interaction between sense of power and prosocial motivation in predicting interpersonal citizenship ($b = .09$, $p = .08$), however moderated-mediation for the effects of LMXSCP through sense of power was not supported (index of moderated mediation = .06, $p = .23$).

Table 16 – Results of Path Analyses Predicting Self-reported Interpersonal Citizenship

Variable	X → M		M → Y	
	<i>b</i>	s.e.	<i>b</i>	s.e.
LMXSCP	.64*	.08	.03	.09
Sense of power			-.02	.08
Prosocial motivation			.40*	.06
Sense of power x prosocial motivation			.09†	.05
Intercept			4.27*	.08
Index of Moderated Mediation			.06	.05

Notes. N = 147; † $p < .10$, * $p < .05$

Table 17 presents the results of path analysis testing Hypothesis 6 at the individual-level. The results did not support mediation or moderated mediation for the effects of LMXSCP on other-reported interpersonal CWB.

**Table 17 – Results of Path Analyses Predicting
Interpersonal CWB**

Variable	X → M		M → Y	
	<i>b</i>	s.e.	<i>b</i>	s.e.
LMXSCP	.64*	.08	.03	.09
Sense of power			.07	.08
Work-based efficacy			.11	.07
Sense of power x work-based efficacy			.06	.06
Intercept			2.30*	.08

Notes. N = 147; **p* < .05

Table 18 presents the results of path analysis testing Hypothesis 6 at the individual-level using self-reported interpersonal CWB. The results did not support mediation or moderated mediation for the effects of LMXSCP on self-reported interpersonal CWB.

**Table 18 – Results of Path Analyses Predicting
Interpersonal CWB**

Variable	X → M		M → Y	
	<i>b</i>	s.e.	<i>b</i>	s.e.
LMXSCP	.64*	.08	-.09	.08
Sense of power			.11	.07
Work-based efficacy			-.02	.06
Sense of power x work-based efficacy			.08	.05
Intercept			1.94*	.07

Notes. N = 147; **p* < .05

Relaxing sample constraints. To test my hypotheses, I restricted my sample to include a minimum of three data points (for coworker relationships) for each focal employee. To relax this constraint, I conducted a test of all of my proposed hypotheses using a sample that included a

minimum of two coworker relationships for each focal employee. This resulted in a sample size of 153 focal employees (level-2) and 564 relationships (level-1). The results from these analyses revealed a similar pattern of relationships as the original test of my hypotheses: Hypotheses 1 was supported; Hypotheses 2 was not supported, although there was evidence of a significant interaction effect of task interdependence, the direction of this effect was opposite of my original hypothesizing; and Hypotheses 3-6 were not supported. This suggests that relaxing the constraint from a minimum of three to two data points for each focal employee was not an alternative explanation for the results found in my primary analyses.

Antecedents of LMXSCP. In another set of supplemental analyses, I examined how the variables specified in the five-factor model of personality (extraversion, agreeableness, conscientiousness, emotional stability, and openness) were related to LMXSCP, LMX, and other measures of LMX differences used in the prior literature. Table 19 presents the results of these regression analyses. In total, the five-factor model accounted for 5% of the variability in each focal employee's average LMXSCP (aggregated from the relational-level). Specifically, extraversion had a marginal positive relationship between extraversion and LMXSCP(mean) ($b = .20, p = .06$).

No other personality trait was a significant predictor of an employee's average LMXSCP. With respect to the variability in a focal employee's LMXSCP (measured as the standard deviation from the relational-level), the five-factor model accounted for 8% of the variance. Conscientiousness had a marginal negative relationship with LMXSCP(sd) ($b = -.16, p = .06$). No other personality trait was a significant predictor of variability in an employee's LMXSCP.

Examining the relationship between the five-factor model and an employee's LMX revealed that extraversion was the only statistically significant predictor, with a marginally

significant positive relationship with LMX ($b = .17, p = .10$). In total, the five personality variables explained 8% of the variance in LMX. Similarly, with respect to LMX social comparison (LMXSC), a direct perceptual measure of LMX differences at the individual-level, my results showed that extraversion was the only statistically significant predictor, with a significant positive relationship with LMX ($b = .27, p < .05$). In total, the five-factor model accounted for 10% of the variance in LMXSC.

Turning to the indirect measures of LMX differences (rLMX and LMXRS), the results of these analyses showed that the five-factor model accounted for 7% of the variance in an employee's rLMX score. Again, extraversion was the only significant predictor of rLMX, with a marginal positive relationship ($b = .17, p = .09$). With respect to LMXRS, my results suggest that the five-factor model, taken together, explained 6% of the variance in LMXRS. However, none of the personality traits explained incremental variance in LMX relational separation.

Table 19 – Results of Regression Analyses Comparing Five factor Model of Personality

Predicting LMX-related Variables

Variable	LMXSCP _(mean)	LMXSCP _(sd)	Leader-member Exchange	LMX Social Comparison	Relative LMX	LMX Relational Separation
Extraversion	.20 [†]	-.13	.17 [†]	.27 [*]	.17 [†]	-.01
Agreeableness	-.09	-.04	.04	-.08	.01	.06
Conscientiousness	.10	-.16 [†]	.07	.10	.09	.07
Emotional Stability	.08	-.01	.12	.09	.12	-.10
Openness	-.06	-.10	-.11	-.13	-.05	.14
<i>R</i> ²	.05	.08	.08	.10	.07	.06

Notes. N = 147; [†]*p* < .10, ^{*}*p* < .05

Comparison with prior approaches to capture LMX differences. In the supplemental analyses below, I compare the approach taken in this dissertation with prior approaches that have been taken in the existing literature to capture LMX differences for the dependent variables that were measured. These include several outcome variables commonly investigated in organizational research.

Relational-level outcomes. In this dissertation, I used a perceptual measure of LMX differences that asked participants to directly compare their LMX standing with each reference coworker. Alternatively, the existing literature has more commonly used an *indirect* measure of LMX differences by using difference scores between a focal employee's LMX quality and a target referent (e.g., relative LMX). It should be noted that, to my knowledge, there is no study to date that has considered relative LMX between dyadic relationship of two coworkers, but instead subtract the workgroup's average LMX quality to assess a focal employee's LMX differences from that of all other group members'. Given the limitations of operationalizing relative LMX as a difference score, I use a polynomial regression approach (Edwards, 1994, 2002) to assess the amount of variance explained using an indirect assessment of LMX differences.

Table 20 presents the HLM results comparing a direct perceptual and an indirect approach to examining LMX differences between a focal employee and a referent coworker for interpersonal behaviors reported by the referent coworker. The direct perceptual approach accounted for 0.59% of the variance and the indirect approach accounted for 4.12% of the variance for interpersonal citizenship. The key predictor when using an indirect approach to assessing LMX differences was the LMX quality of the coworker ($\gamma = .18, p < .05$). This suggests that a referent coworker's LMX relationship with the leader is positively associated with engaging in interpersonal citizenship, which is largely consistent with meta-analytic results

at the individual-level in the LMX literature (Gerstner & Day, 1997; Ilies, et al., 2007).

However, the interaction between a focal employee and a referent coworker did not significantly explain variability in other-reported interpersonal citizenship ($\gamma = .07, p = .11$). The results of these analyses also showed that the direct perceptual approach explained 0.01% of the variance and the indirect approach accounted for 1.03% of the variance for interpersonal CWB.

Table 20 – Results of Multilevel Modeling Comparing Relational Approaches to Capturing LMX Differences

Variable	Interpersonal Citizenship				Interpersonal CWB			
	γ	s.e.	γ	s.e.	γ	s.e.	γ	s.e.
LMXSCP	-.05	.07			.01	.05		
LMX _(self)			-.13	.08			.05	.08
LMX _(other)			.18*	.06			-.05	.04
LMX _(self) x LMX _(self)			-.05	.05			.03	.05
LMX _(self) x LMX _(other)			.07	.05			-.03	.03
LMX _(other) x LMX _(other)			.10	.04			-.02	.03
Intercept	3.80*	.09	3.72*	.12	2.31*	.08	2.28*	.10
R^2 (within individual)	0.59%		4.12%		0.01%		1.03%	

Notes. N = 552; * $p < .05$

Table 21 presents the HLM results comparing a direct perceptual and an indirect approach to examining LMX differences between a focal employee and a referent coworker for interpersonal behaviors reported by the focal employee. The direct perceptual approach accounted for 2.52% of the variance and the indirect approach accounted for 0.84% of the variance for interpersonal citizenship. Similarly to the analyses above, the only significant predictor when using an indirect approach to assessing LMX differences was the LMX quality of the focal employee ($\gamma = .10, p = .07$). The results of these analyses showed that the direct perceptual approach explained 8.51% of the variance, whereas the indirect approach accounted for 0.01% of the variance in self-reports of CWB.

Table 21 – Results of Multilevel Modeling Comparing Relational Approaches to Capturing LMX Differences

Variable	Self-reported Interpersonal Citizenship				Self-reported Interpersonal CWB			
	γ	s.e.	γ	s.e.	γ	s.e.	γ	s.e.
LMXSCP	-.13	.08			.20*	.05		
LMX _(self)			.10	.09			-.11 [†]	.06
LMX _(other)			-.01	.05			-.04	.03
LMX _(self) x LMX _(self)			.10 [†]	.02			-.05	.04
LMX _(self) x LMX _(other)			.02	.05			-.01	.02
LMX _(other) x LMX _(other)			-.03	.03			-.01	.02
Intercept	4.28*	.09	4.18	.13	1.97*	.07	2.05*	.09
R^2 (within individual)	2.52%		0.84%		8.51%		0.01%	

Notes. N = 552; [†] $p < .10$, * $p < .05$

Individual-level outcomes. Within the LMX differences literature, the majority of studies have examined individual-level outcomes. To draw a comparison between the direct perceptual approach taken in this dissertation and existing approaches in the literature, I aggregated each focal employee's LMXSCP across all coworker relationships, creating a mean and standard deviation LMXSCP score (to account for variability in LMXSCP). For each of the outcomes examined below, I included the mean and standard deviation score, as well as an interaction between the two as predictors.

I operationalized prior indirect approaches using the same operationalizations in prior studies. Specifically, relative LMX (rLMX) was operationalized as the difference between a focal employee's LMX quality and average LMX quality of all other workgroup members (Henderson, et al. 2009). LMX relational separation (LMXRS) was operationalized using the formula in Harris, et al. (2014) that treats LMX differences as the square root of the sum of squared differences between a focal employee's LMX quality and the LMX quality of each referent coworker, divided by the size of the team. The original LMX social comparison scale

with a referent comparison of other coworkers in general was included. Finally, a mean value for the interpersonal citizenship and CWB was created to represent a focal employee's interpersonal behaviors towards others in general.

Table 22 provides the results of regression analyses comparing each of these approaches in predicting interpersonal behaviors and task performance. The results show that the LMXSCP approach explained 3% of the variance in interpersonal behaviors and 8% of the variance in interpersonal CWB, compared to less than 1% for all of the prior approaches, both direct and indirect, for both types of behaviors. Both direct perceptual measures explained the most variance in supervisor ratings of task performance, with the LMXSCP approach explaining 32% of the variance and the existing LMXSC measure explaining 28% of the variance. For the indirect approaches to assessing LMX differences, relative LMX explained 15% of the variance and LMXRS explained less than 1% of the variance in task performance.

Table 23 provides the results of regression analyses comparing each of these approaches in predicting affective commitment, job satisfaction, and turnover intentions. The results show that the LMXSCP approach explained 19% of the variance, the existing LMXSC measure explained 9% of the variance, relative LMX explained 8% of the variance, and LMX relational separation explained less than 1% of the variance in affective commitment. For job satisfaction, the LMXSCP approach explained 10% of the variance, the existing LMXSC measure explained 9% of the variance, relative LMX explained 7% of the variance, and LMX separation explained less than 1% of the variance in affective commitment. For job satisfaction, the LMXSCP approach explained 10% of the variance, the existing LMXSC measure explained 9% of the variance, relative LMX explained 7% of the variance, and LMX relational separation explained

Table 22 – Results of Regression Analyses Comparing Individual-level Approaches to Capturing LMX Differences on Interpersonal Behaviors and Task Performance

Variable	Interpersonal citizenship ^a			Interpersonal CWB ^a			Task performance ^b		
	<i>b</i>	s.e.	<i>R</i> ²	<i>b</i>	s.e.	<i>R</i> ²	<i>b</i>	s.e.	<i>R</i> ²
<i>Direct perceptual approach 1</i>									
LMXSCP _(mean) ^a	.33*	.16		.01	.14		.60*	.11	
LMXSCP _(sd) ^a	-.09	.16		.40*	.13		-.29*	.11	
LMXSCP _(mean) x LMXSCP _(sd)	-.32	.18	.03	.09	.15	.08	-.13	.13	.32
<i>Direct perceptual approach 2</i>									
LMX social comparison (LMXSC)	.03	.07	.01	.08	.06	.01	.36*	.05	.28
<i>Indirect approach 1</i>									
Relative LMX (rLMX)	-.06	.09	.01	.03	.08	.01	.34*	.07	.15
<i>Indirect approach 2</i>									
LMX relational separation (LMXRS)	.10	.14	.01	-.06	.12	.01	-.10	.11	.01

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

Table 23 – Results of Regression Analyses Comparing Individual-level Approaches to Capturing LMX Differences on Job Attitudes

Variable	Affective Commitment			Job Satisfaction			Turnover Intentions		
	<i>b</i>	s.e.	<i>R</i> ²	<i>b</i>	s.e.	<i>R</i> ²	<i>b</i>	s.e.	<i>R</i> ²
<i>Direct perceptual approach 1</i>									
LMXSCP _(mean) ^a	.67*	.16		.44*	.16		-.57*	.21	
LMXSCP _(sd) ^a	-.43*	.15		-.32*	.15		.21	.20	
LMXSCP _(mean) x LMXSCP _(sd)	-.37*	.18	.19	-.21	.18	.10	.49*	.24	.06
<i>Direct perceptual approach 2</i>									
LMX social comparison (LMXSC)	.27*	.07	.09	.24*	.07	.09	-.24*	.09	.05
<i>Indirect approach 1</i>									
Relative LMX (rLMX)	.32*	.09	.08	.28*	.08	.07	-.51*	.11	.13
<i>Indirect approach 2</i>									
LMX relational separation (LMXRS)	.01	.15	.01	-.34*	.13	.04	.20	.18	.01

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

4% of the variance. Finally, with regards to turnover intentions, the LMXSCP approach explained 6% of the variance, the existing LMXSC measure explained 5% of the variance, relative LMX explained 13% of the variance, and LMX relational separation explained less than 1% of the variance.

Team-level outcomes. As part of this dissertation, I had originally proposed to compare an LMXSCP approach to how LMX differences is operationalized at the team-level (group-level variance scores of member LMX relationships). However, it is not possible to make interpretable aggregations from the relational-level up to the team-level of analysis. Specifically, aggregating LMXSCP scores from the relational-level creates a mean and standard deviation score at the individual-level. A further aggregation creates (a) a mean of a mean score, (b) a standard deviation of a mean score, (c) a mean of a standard deviation score, and (d) a standard deviation of the standard deviation score. Thus, I do not include supplemental analyses for an LMXSCP approach predicting team-level outcomes as originally proposed.

Interactive effects of LMX differences and team-level variables to predict outcomes. In the final set of supplemental analyses, I examined whether measures of LMX differences would interact with team-level factors (i.e., authority differentiation, skill differentiation, temporal stability, team viability, or team performance) to predict employee outcomes (i.e., interpersonal citizenship, interpersonal CWB, task performance, affective commitment, job satisfaction, or turnover intentions). Due to the size and length of each table (Tables 24-33), the results of these analyses are presented in Appendix A.

Moderating effects of authority differentiation. Table 24 presents the results for the moderating effects of authority differentiation for interpersonal behaviors and task performance. Specifically, I found a significant negative relationship (direct effect) between authority

differentiation and interpersonal citizenship. However, authority differentiation did not have a significant cross-level interaction effect on interpersonal citizenship with any of the measures of LMX differences. Authority differentiation also had a significant positive relationship (direct effect) with interpersonal CWB. Of the variables related to LMX differences, only LMX social comparison had a marginally significant cross-level interaction with authority differentiation ($b = .05, p = .05$) to predict interpersonal CWB. With respect to task performance, the results of these analyses only showed that LMX relational separation interacted with authority differentiation ($b = -.13, p < .05$) to predict interpersonal CWB. Figure 7 presents the illustration of this relationship.

Figure 7 – Cross-level Interaction between LMXRS and Authority Differentiation

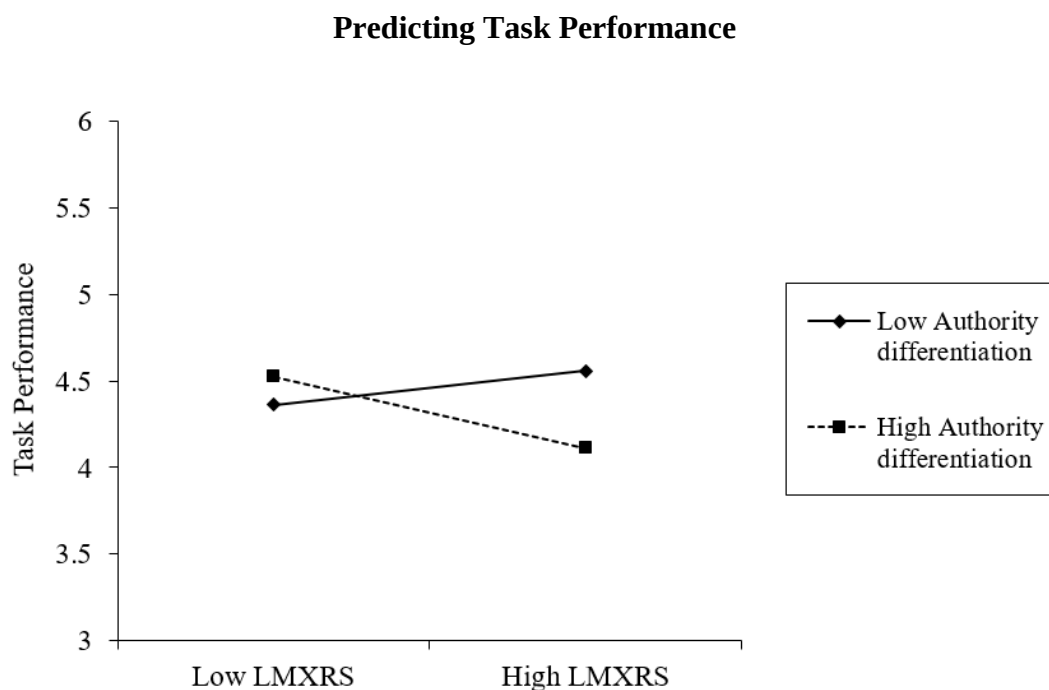


Table 25 presents the results for the moderating effects of authority differentiation for job attitudes. Specifically, I found that authority differentiation had a marginally significant cross-level interaction with the average LMXSCP reported by a focal employee ($b = -.09, p = .07$) to

predict affective commitment. No other measure of LMX differences interacted with authority differentiation to predict affective commitment. With respect to job satisfaction, I found that authority differentiation had a significant cross-level interaction with (a) the variability in LMXSCP ($b = -.21, p < .05$) and (b) relative LMX ($b = .07, p < .05$). Figures 8 and 9 presents the illustration of these relationships, respectively. Finally, authority differentiation had a significant cross-level interaction with (a) focal employees' average LMXSCP ($b = -.15, p < .05$) and (b) LMX social comparisons ($b = -.09, p < .05$) to predict turnover intentions. Figures 10 and 11 presents the illustration of these relationships, respectively.

Figure 8 – Cross-level Interaction between LMXSCP_(sd) and Authority Differentiation

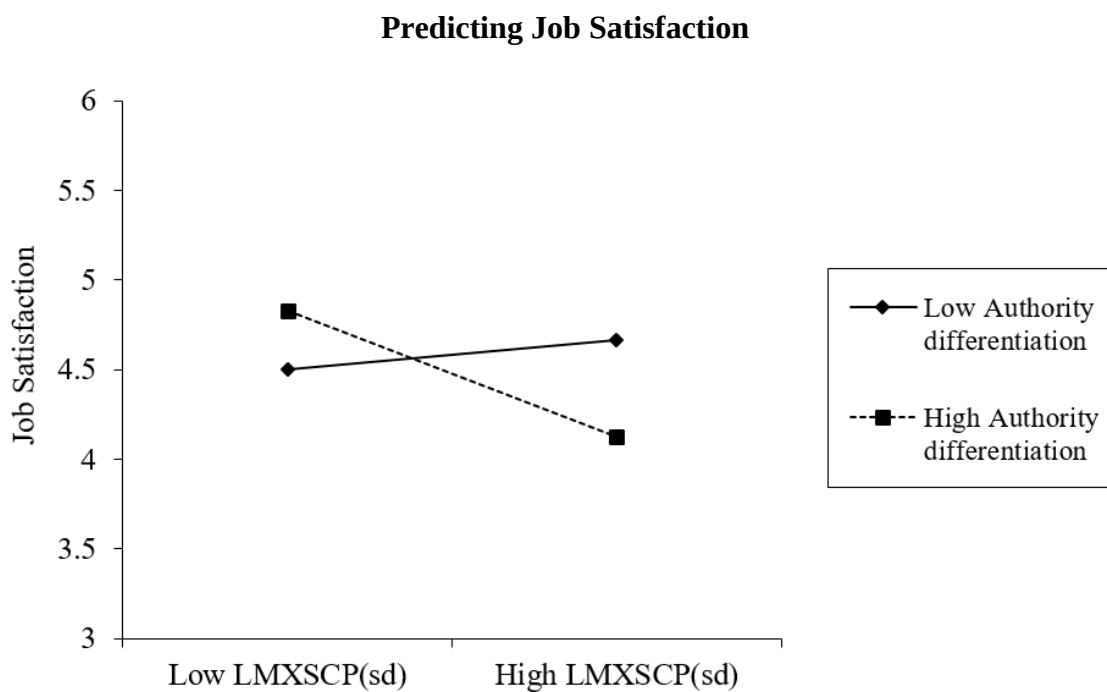


Figure 9 – Cross-level Interaction between rLMX and Authority Differentiation

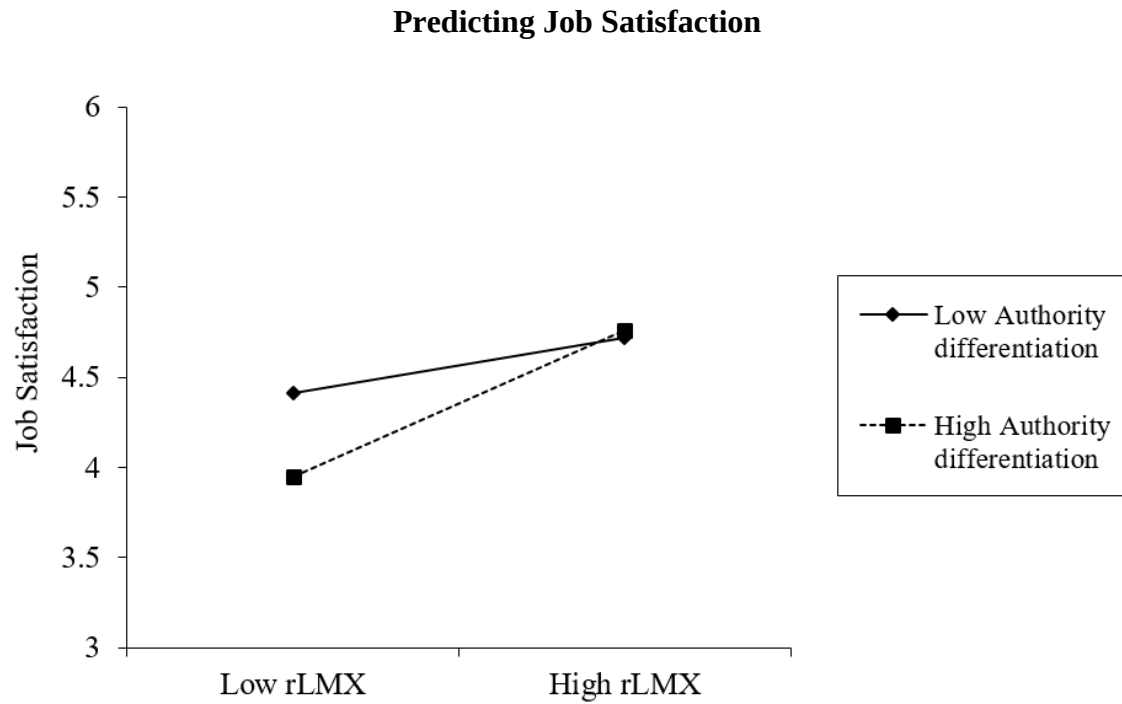


Figure 10 – Cross-level Interaction between LMXSCP_(mean) and Authority Differentiation

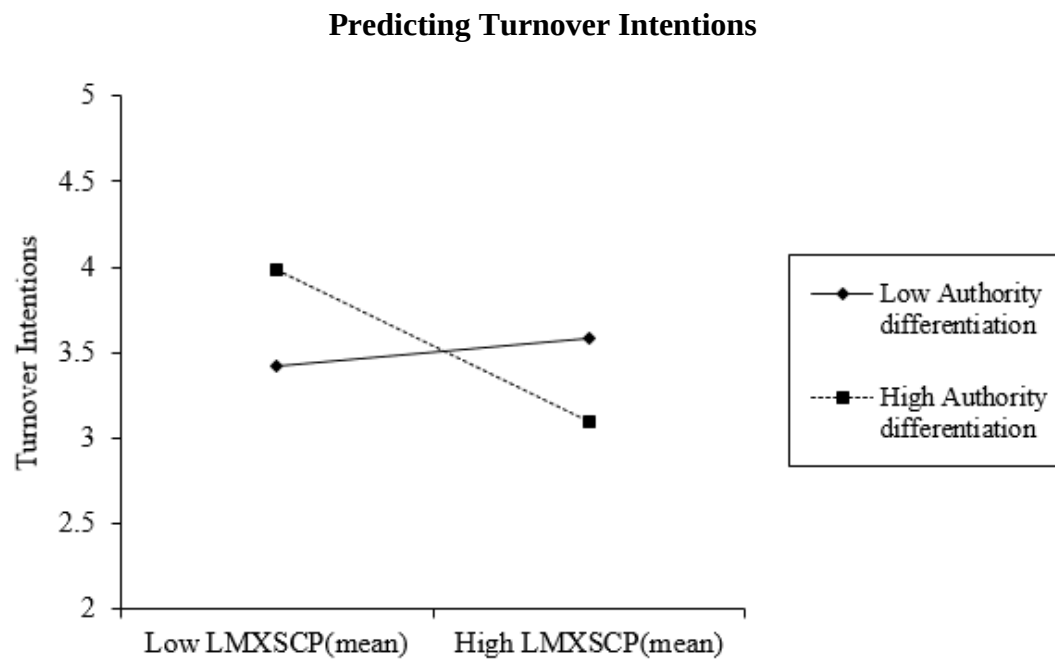
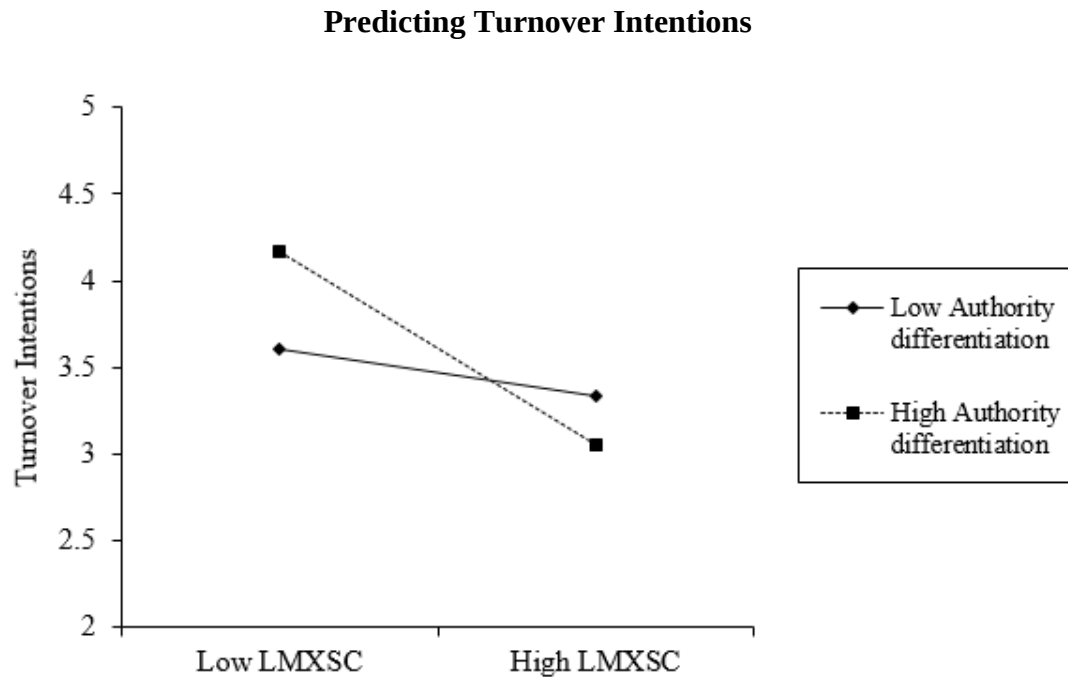


Figure 11 – Cross-level Interaction between LMXSC and Authority Differentiation



Moderating effects of skill differentiation. Table 26 presents the results for the moderating effects of skill differentiation for interpersonal behaviors and task performance. Specifically, skill differentiation had a marginally significant cross-level interaction effect with LMXSC ($b = .08$, $p = .07$) to predict interpersonal citizenship. No other measure of LMX differences interacted with skill differentiation to predict interpersonal citizenship. With respect to interpersonal CWB, I found that skill differentiation had a significant cross-level interaction with (a) focal employees' average LMXSCP ($b = -.14$, $p < .05$) and (b) LMXSC ($b = -.11$, $p < .05$). Figures 12 and 13 presents the illustration of these relationships, respectively. Additionally, I found a marginal significant cross-level interaction between skill differentiation and relative LMX ($b = -.09$, $p = .08$). Finally, my results revealed a marginally significant cross-level interaction between skill differentiation and focal employees' average LMXSCP ($b = .09$, $p = .06$) when predicting task performance.

Figure 12 – Cross-level Interaction between LMXSCP_(mean) and Skill Differentiation

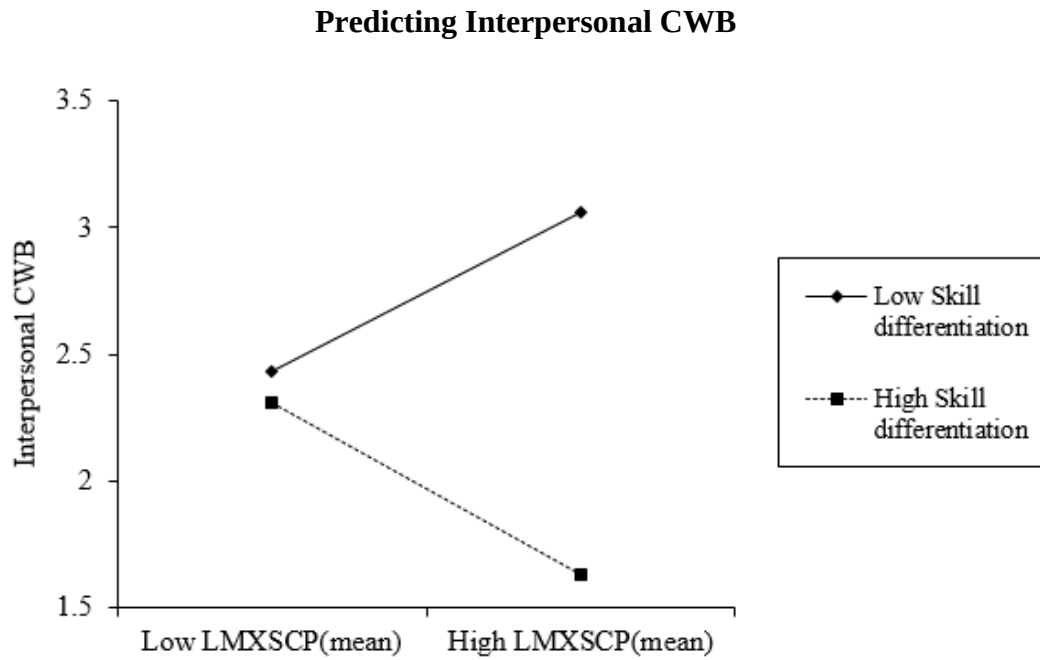


Figure 13 – Cross-level Interaction between LMXSC and Skill Differentiation

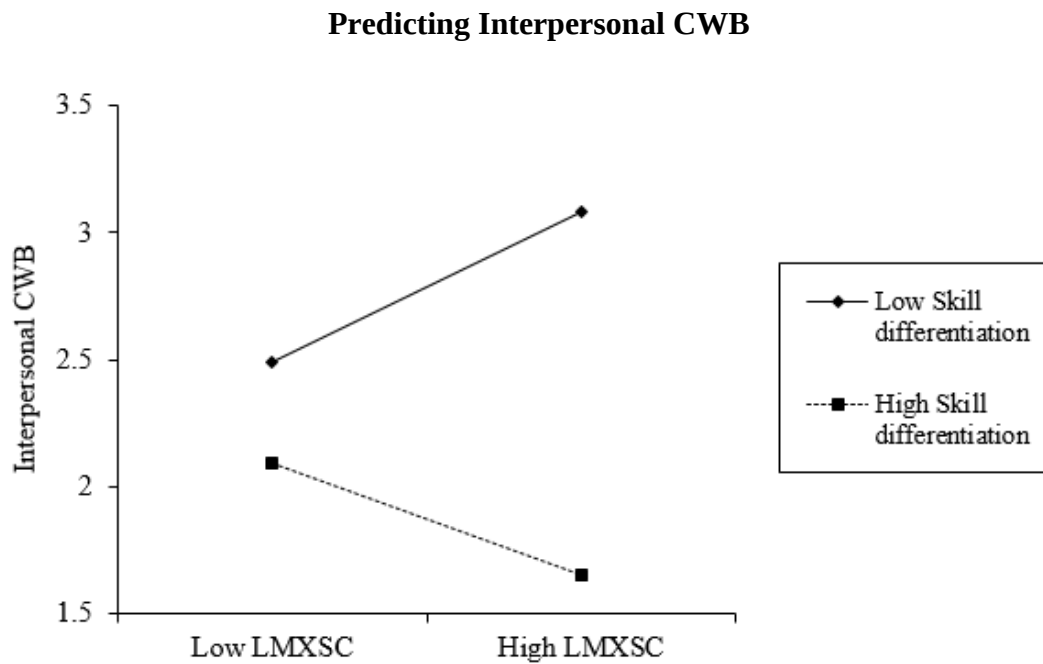


Table 27 presents the moderating effects of skill differentiation for job attitudes. Specifically, I found that skill differentiation had a marginally significant cross-level interaction effect with (a) focal employees' average LMXSCP ($b = .13$, $p = .05$) and (b) LMX relational separation ($b = .20$, $p = .08$) when predicting affective commitment. With respect to job satisfaction, I found that skill differentiation had a significant cross-level interaction effect with (a) focal employees' average LMXSCP ($b = -.17$, $p < .05$), (b) LMXSC ($b = -.08$, $p < .05$), and (c) relative LMX ($b = -.20$, $p < .05$). Figures 14, 15, and 16 presents the illustration of these relationships, respectively. Finally, skill differentiation did not interact with any measure of LMX difference to predict turnover intentions.

Figure 14 – Cross-level Interaction between LMXSCP_(mean) and Skill Differentiation

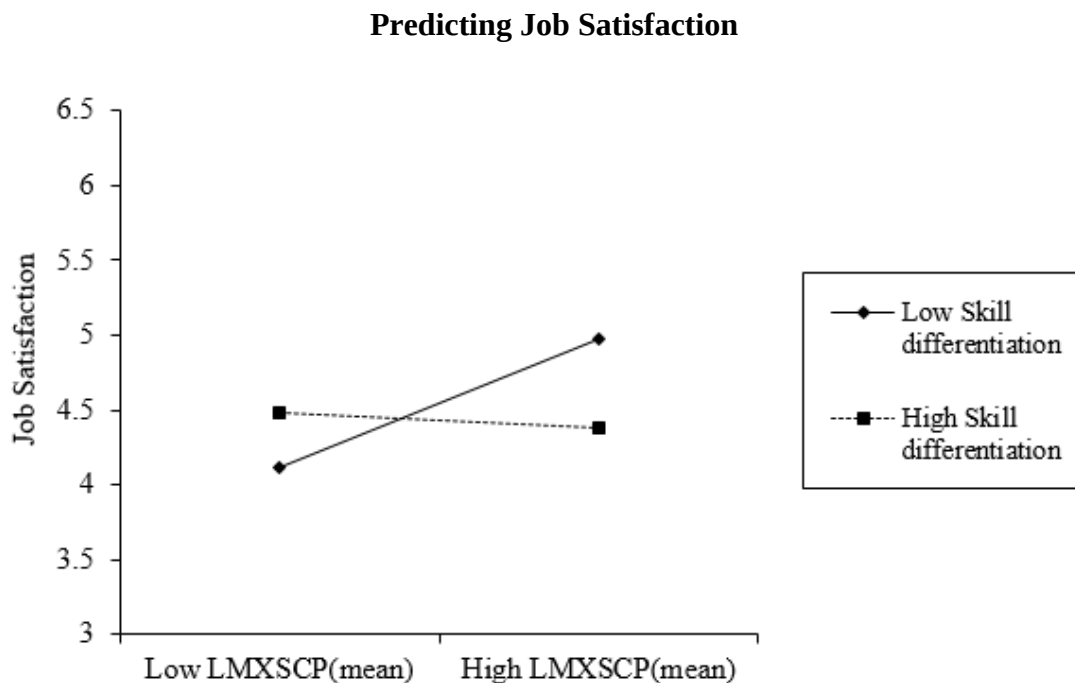


Figure 15 – Cross-level Interaction between LMXSC and Skill Differentiation

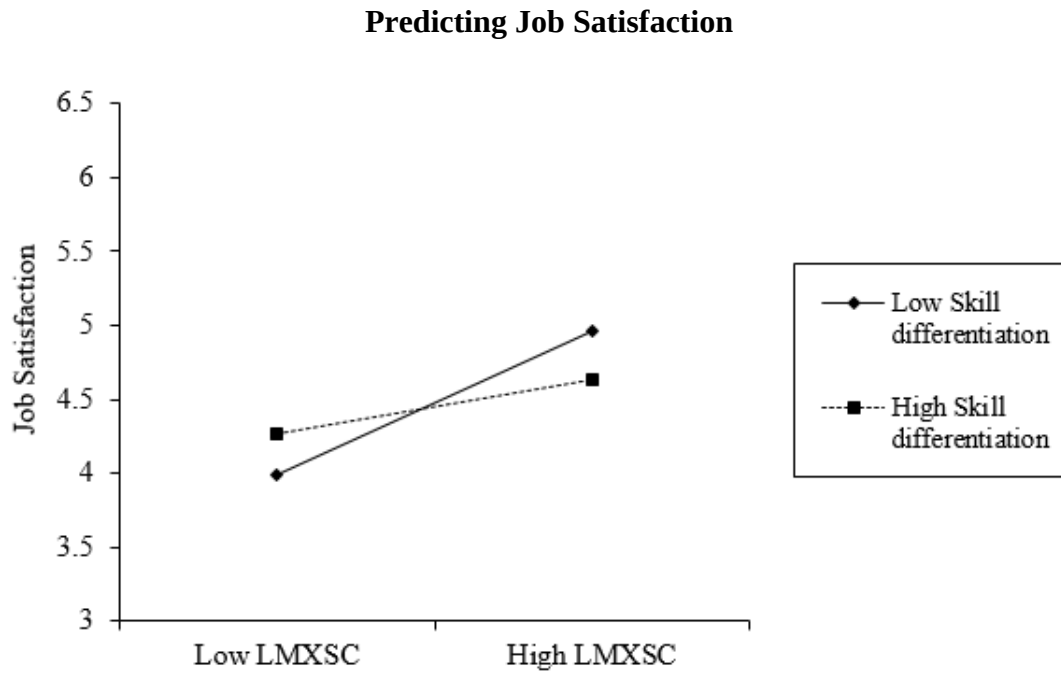
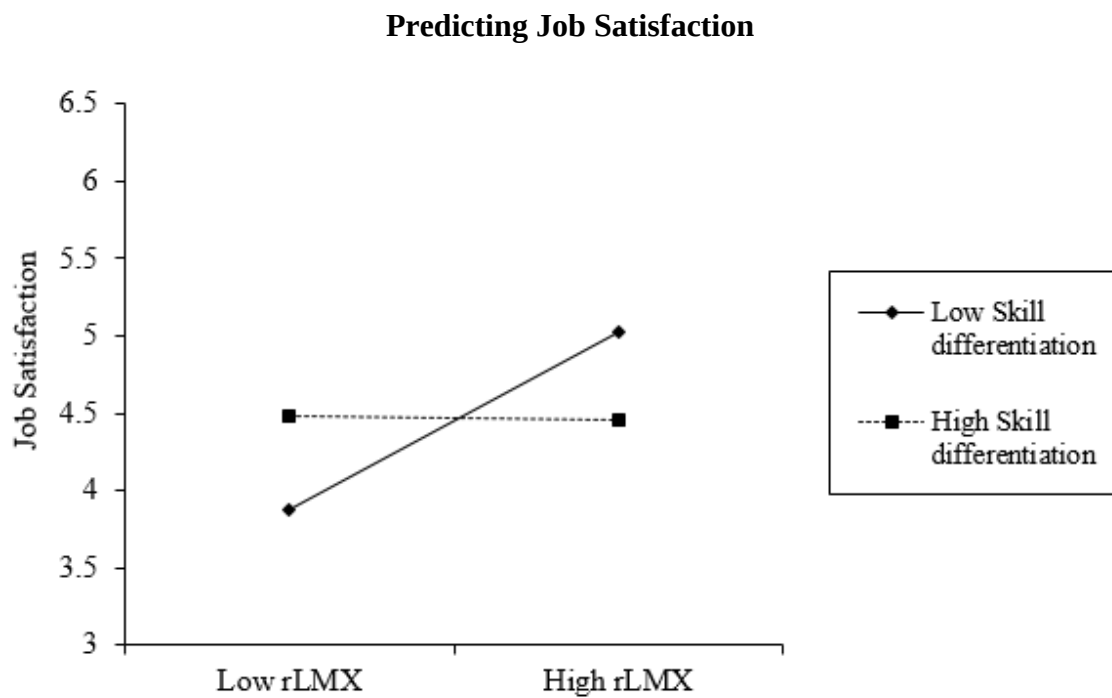


Figure 16 – Cross-level Interaction between rLMX and Skill Differentiation



Moderating effects of temporal stability. Table 28 presents the moderating effects of temporal stability for interpersonal behaviors and task performance. Specifically, I found that temporal stability had a marginally significant cross-level interaction with LMXSC ($b = -.07$, $p = .09$) to predict interpersonal citizenship. No other measure of LMX differences interacted with temporal stability to predict interpersonal citizenship. Moreover, none of the measures of LMX differences interacted with temporal stability to significantly explain variance in interpersonal CWB or task performance.

Table 29 presents the moderating effects of temporal stability for job attitudes. Specifically, I found no significant interaction effects between temporal stability and measures of LMX differences when predicting affective commitment. With respect to job satisfaction, I found that temporal stability had a significant cross-level interaction with (a) variability in focal employees' LMXSCP ($b = -.22$, $p < .05$) and (b) LMX relational separation ($b = .22$, $p < .05$). Figures 17 and 18 presents the illustration of these relationships, respectively. Finally, I found that temporal stability had a significant cross-level interaction with focal employees' LMXSCP ($b = -.14$, $p < .05$) to predict turnover intentions. Figure 19 presents the illustration of this relationship.

Figure 17 – Cross-level Interaction between LMXSCP_(sd) and Temporal Stability

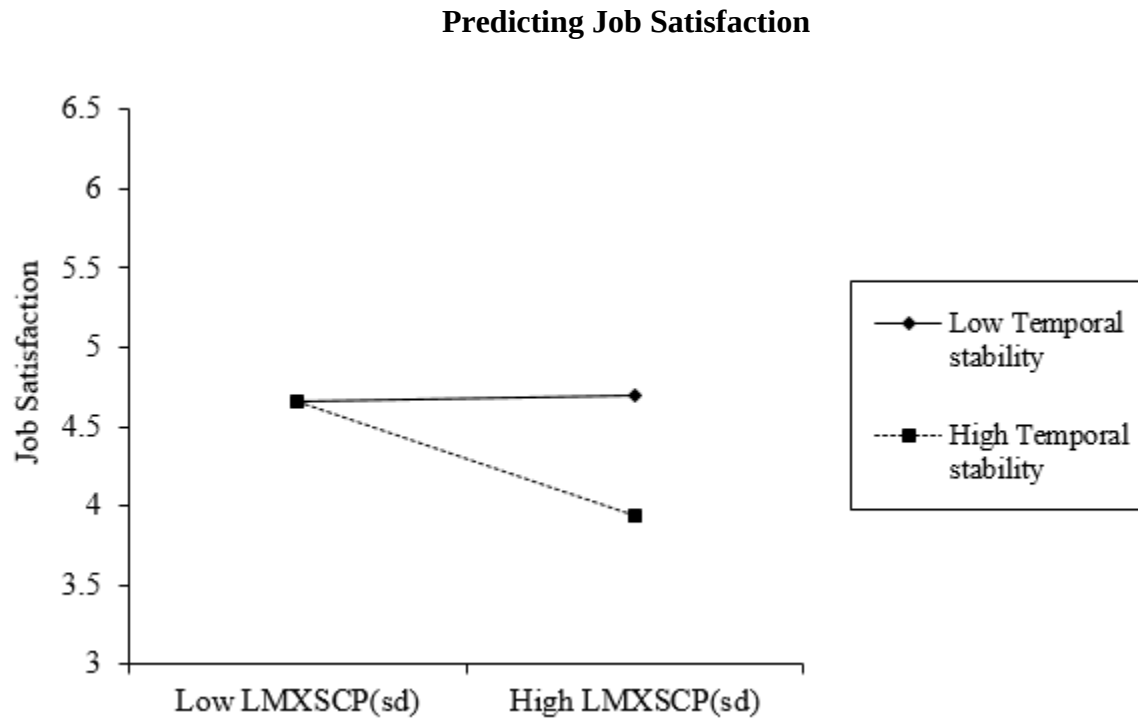


Figure 18 – Cross-level Interaction between LMXRS and Temporal Stability

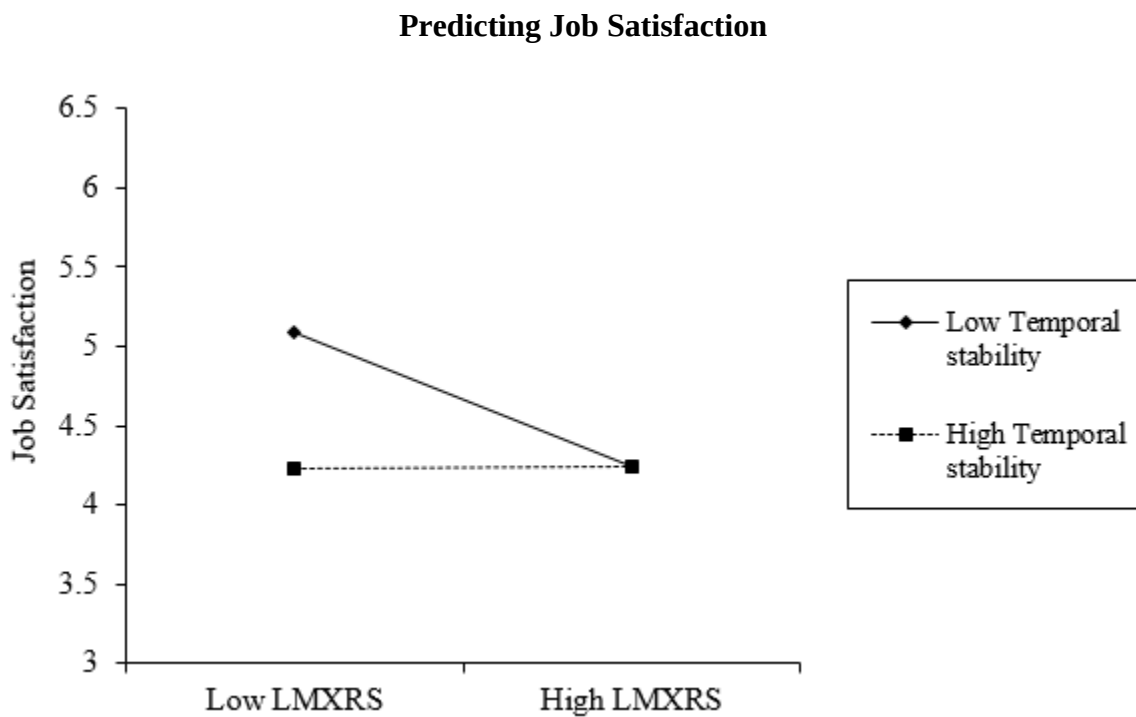
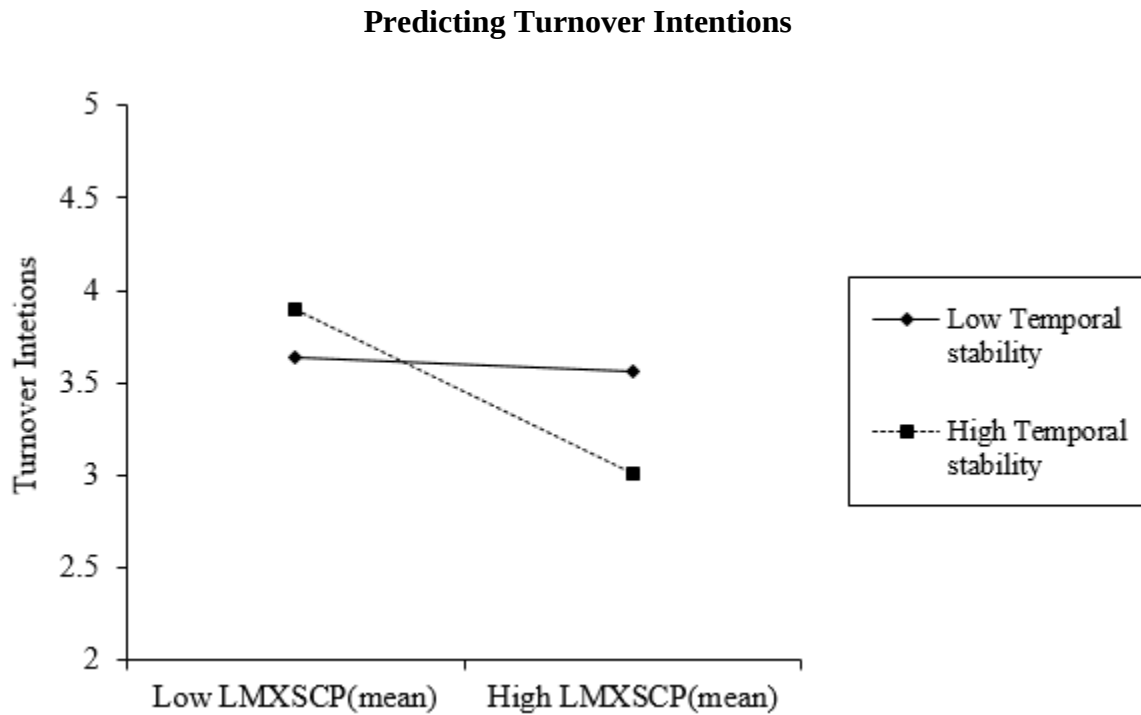


Figure 19 – Cross-level Interaction between LMXSCP_(mean) and Temporal Stability



Moderating effects of team viability. Table 30 presents the moderating effects of team viability for interpersonal behaviors and task performance. Specifically, I found that team viability had a marginally significant cross-level interaction with LMX relational separation ($b = .37, p = .06$) to predict interpersonal citizenship behaviors. With respect to interpersonal CWB, I found that team viability had a significant cross-level interaction with LMX relational separation ($b = -.35, p < .05$). Figure 20 presents the illustration of this relationship. Finally, I found that team viability had a significant cross-level interaction with (a) relative LMX ($b = -.20, p < .05$) and (b) LMX relational separation ($b = .32, p < .05$) to predict task performance. Figures 21 and 22 presents the illustration of these relationships, respectively. Additionally, I found a marginally significant cross-level interaction between temporal stability and focal employees' (a) average LMXSCP ($b = -.11, p = .09$) and (b) variability in LMXSCP ($b = -.18, p = .07$) when predicting task performance.

Figure 20 – Cross-level Interaction between LMXRS and Team Viability

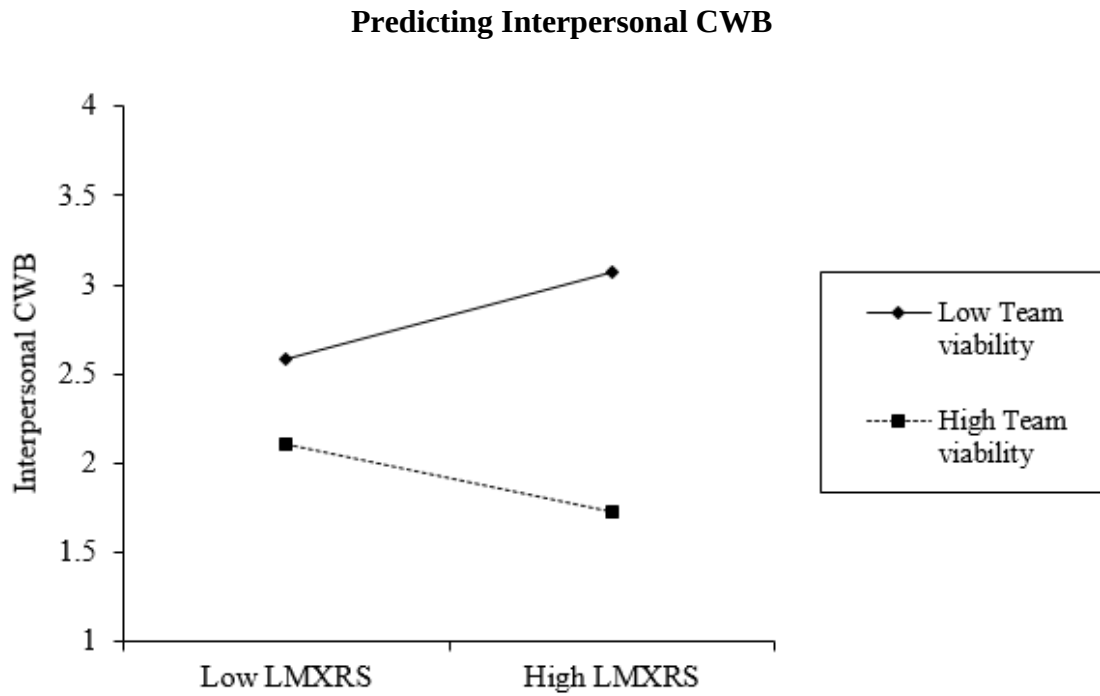


Figure 21 – Cross-level Interaction between rLMX and Team Viability

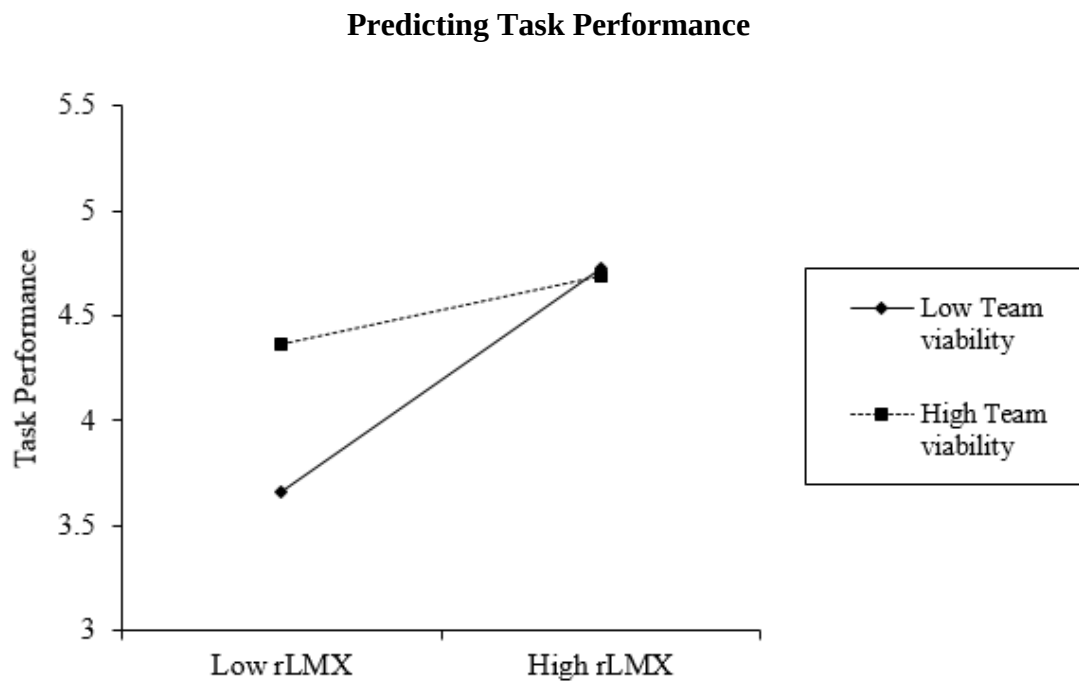


Figure 22 – Cross-level Interaction between LMXRS and Team Viability

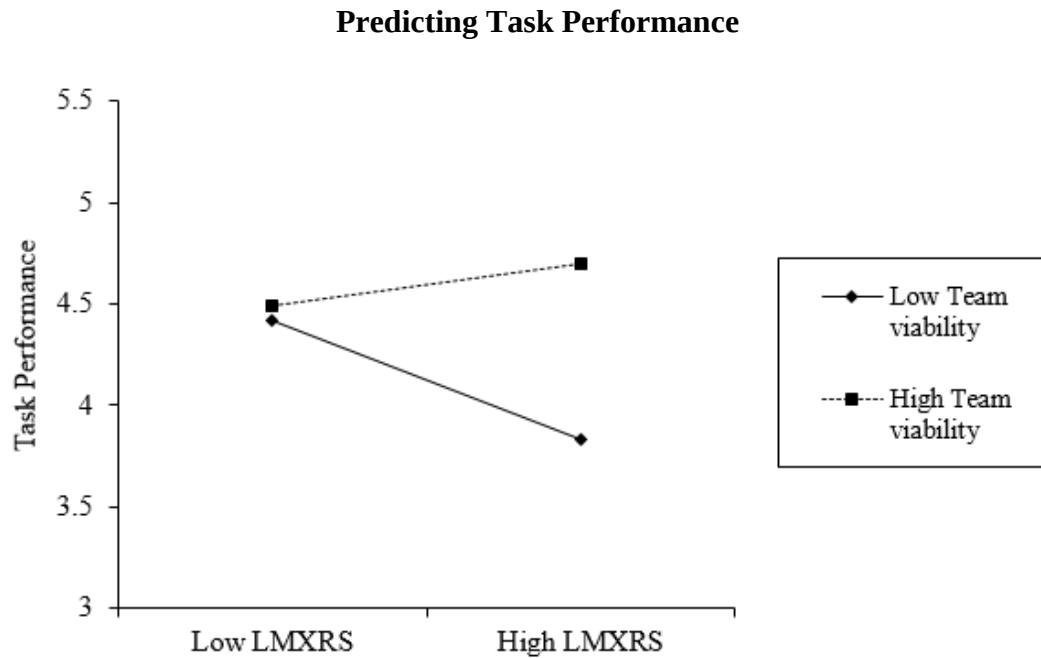
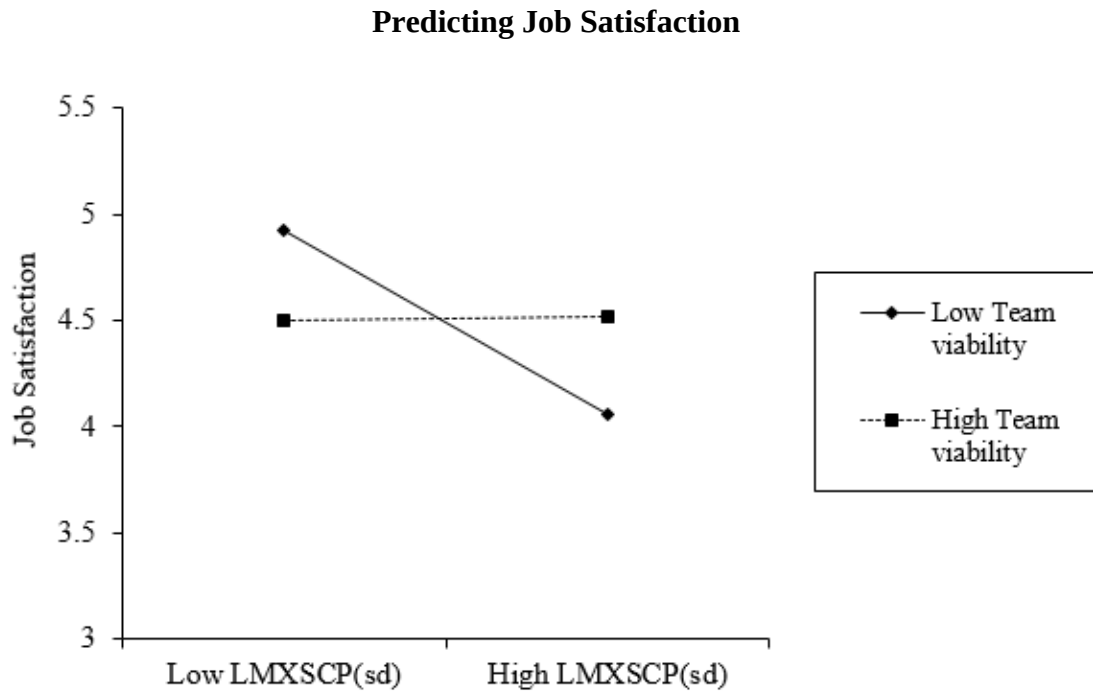


Table 31 presents the moderating effects of team viability for job attitudes. Specifically, I found that team viability had a marginally significant cross-level interaction effect with relative LMX ($b = -.18, p = .08$) when predicting affective commitment. With respect to job satisfaction, I found that team viability had a significant cross-level interaction with focal employees' variability in LMXSCP ($b = .40, p < .05$). Figure 23 presents the illustration of this relationship. Finally, team viability did not interaction with any measure of LMX differences to predict turnover intentions.

Moderating effects of team performance. Table 32 presents the moderating effects of team performance for interpersonal behaviors and task performance. Specifically, I did not find that team performance interacted with any measure of LMX differences to predict interpersonal citizenship. With respect to interpersonal CWB, I found that team performance had a significant

Figure 23 – Cross-level Interaction between LMXSCP_(sd) and Team Viability



cross-level interaction effect with (a) focal employees' average LMXSCP ($b = .17, p < .05$), (b) LMXSC ($b = .11, p < .05$), and (c) relative LMX ($b = .11, p < .05$). Figures 24, 25, and 26 presents the illustration of these relationships, respectively. Additionally, team performance had a marginally significant interaction effect with focal employees' variability in LMXSCP ($b = .24, p = .06$). Finally, I found that team performance had significant cross-level interaction effects with (a) focal employees' average LMXSCP ($b = -.15, p < .05$), (b) LMXSC ($b = -.11, p < .05$), and relative LMX ($b = -.13, p < .05$) to predict task performance. Figures 27, 28, and 29 presents the illustration of these relationships, respectively.

Figure 24 – Cross-level Interaction between LMXSCP_(mean) and Team Performance

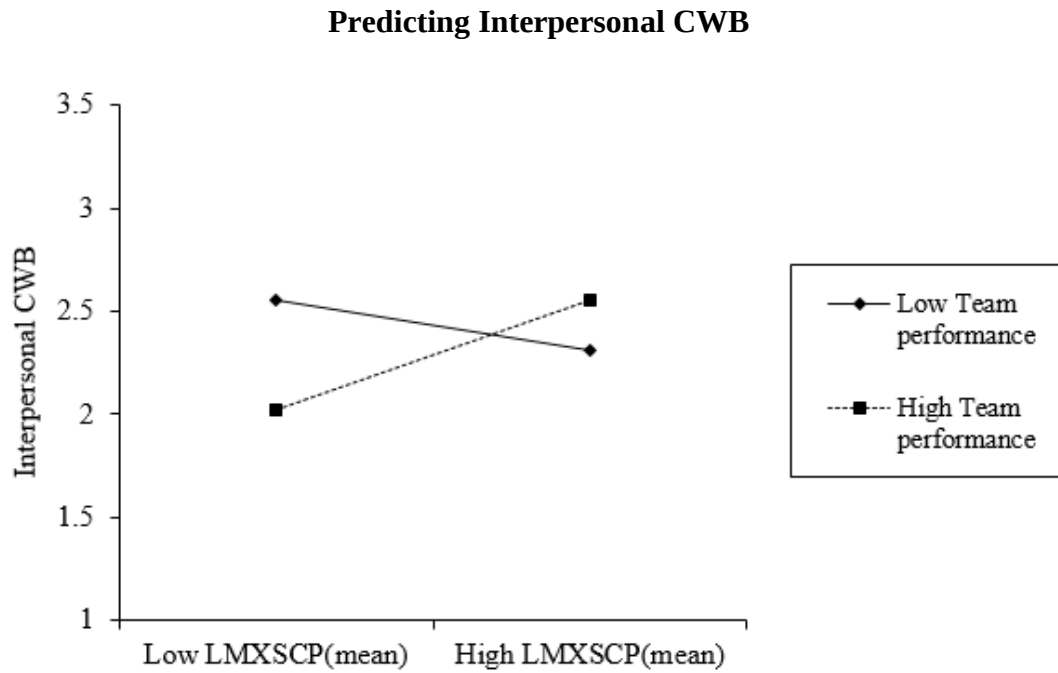


Figure 25 – Cross-level Interaction between LMXSC and Team Performance

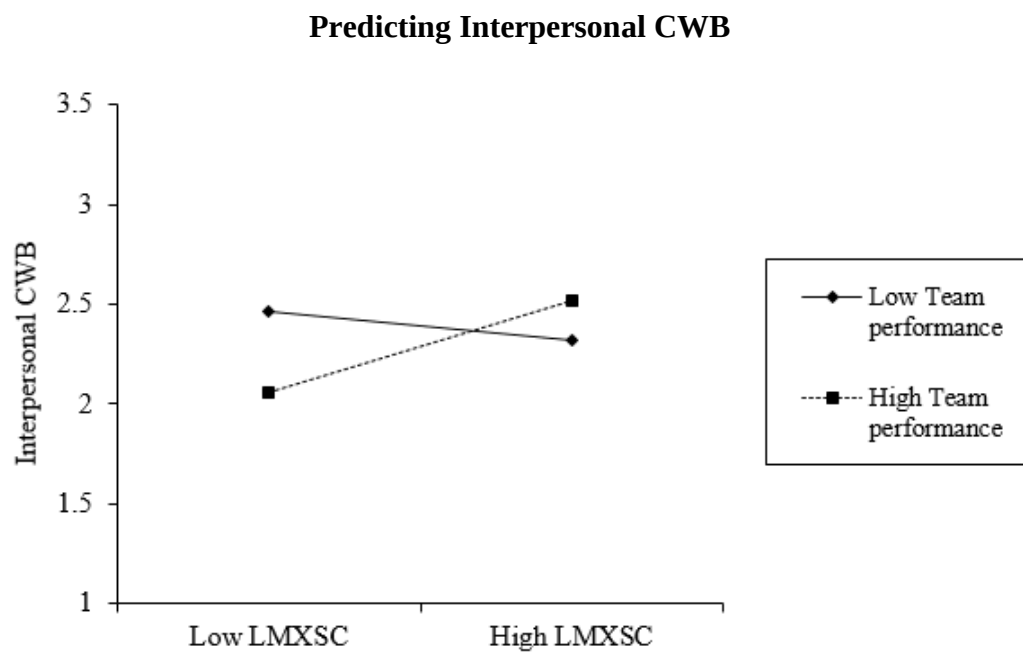


Figure 26 – Cross-level Interaction between rLMX and Team Performance

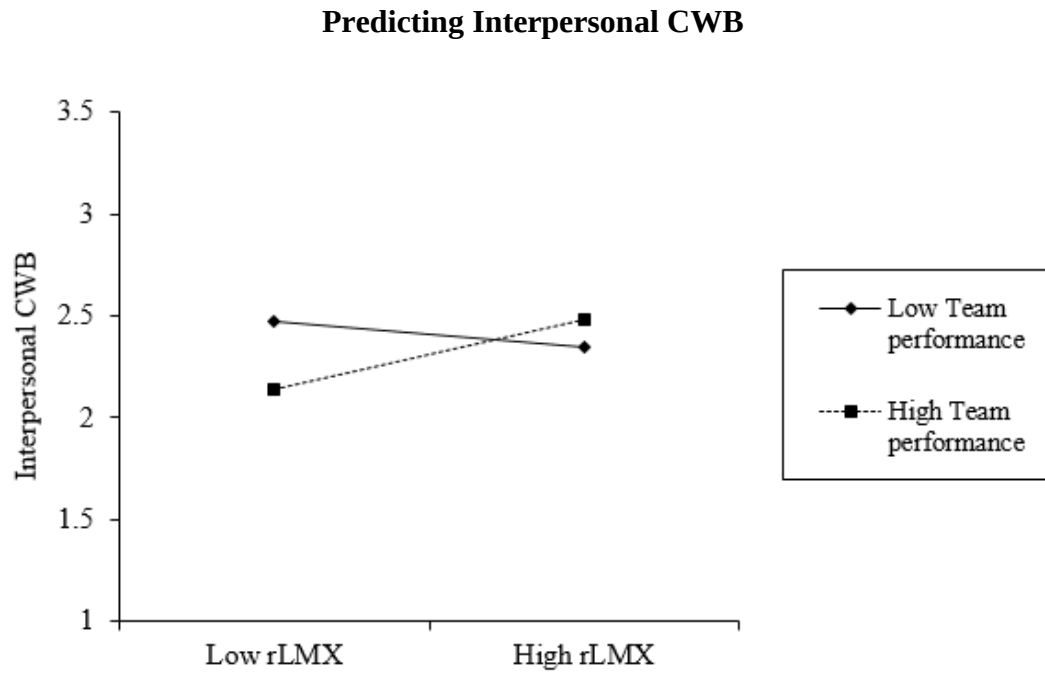


Figure 27 – Cross-level Interaction between LMXSCP_(mean) and Team Performance

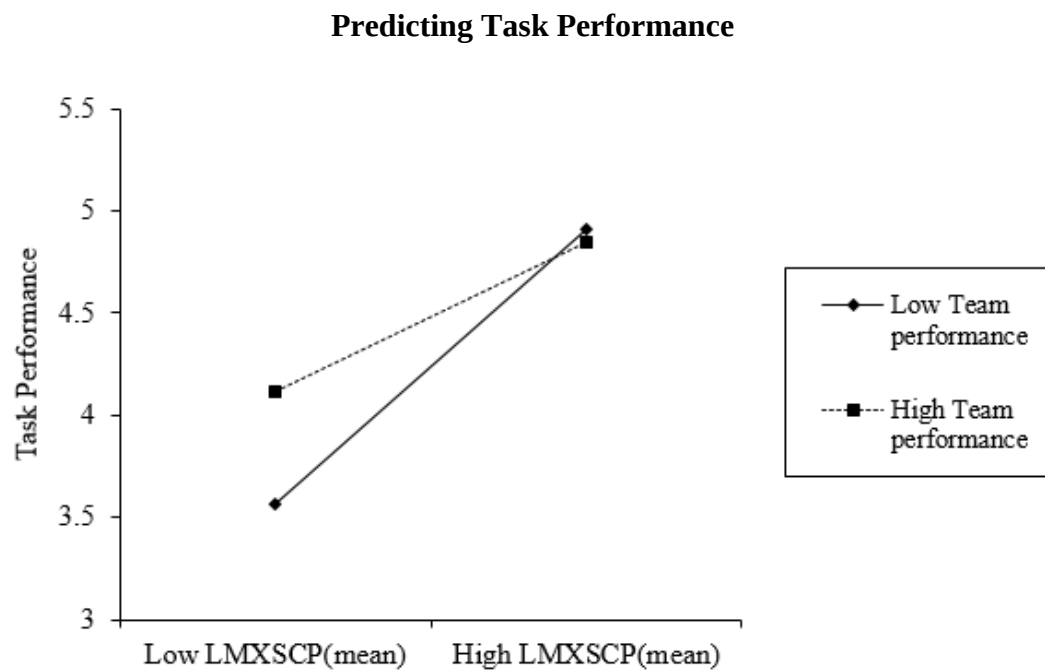


Figure 28 – Cross-level Interaction between LMXSC and Team Performance

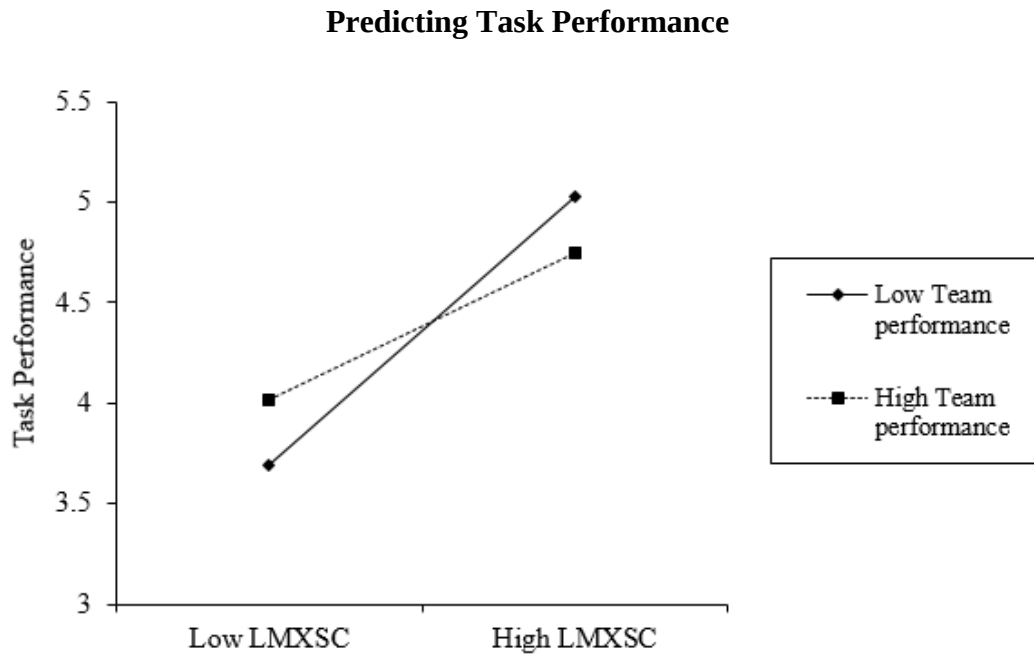


Figure 29 – Cross-level Interaction between rLMX and Team Performance

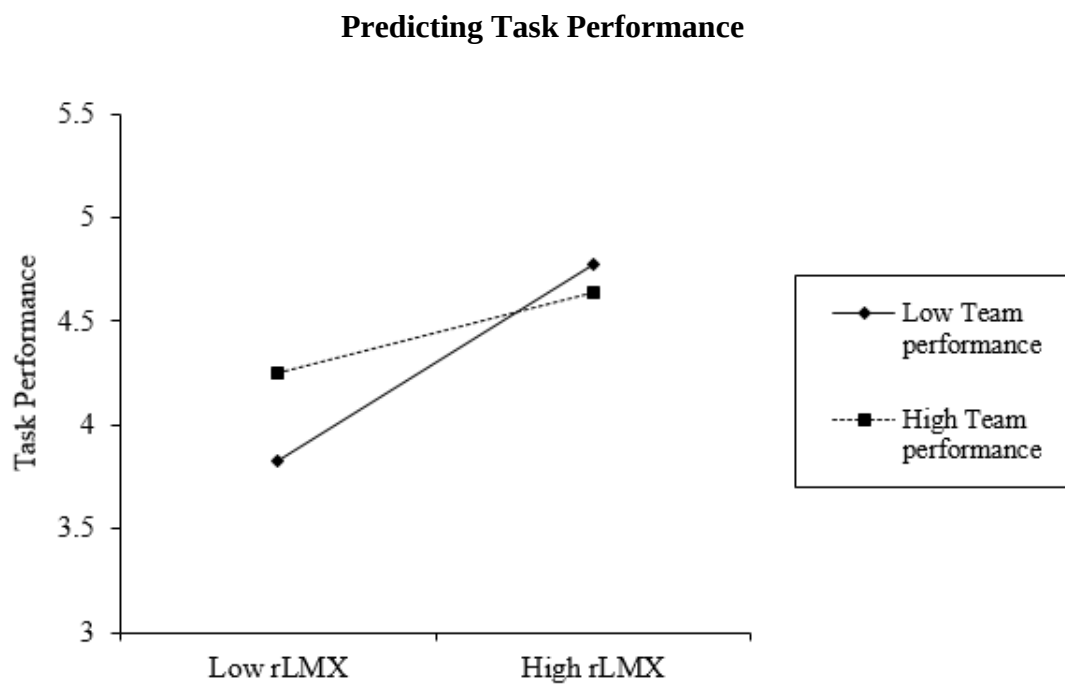


Table 33 presents the moderating effects of team performance for job attitudes. Specifically, I did not find evidence that any measure of LMX differences interacted with team performance to predict affective commitment. With respect to job satisfaction, I found that team performance had a marginally significant cross-level interaction effect with relative LMX ($b = .13, p = .05$). Finally, team performance had significant cross-level interaction effects with (a) focal employees' average LMXSCP ($b = .21, p < .05$) and (b) relative LMX ($b = .16, p < .05$) to predict turnover intentions. Figures 30 and 31 presents the illustration of these relationships, respectively.

Figure 30 – Cross-level Interaction between LMXSCP_(mean) and Team Performance Predicting Turnover Intentions

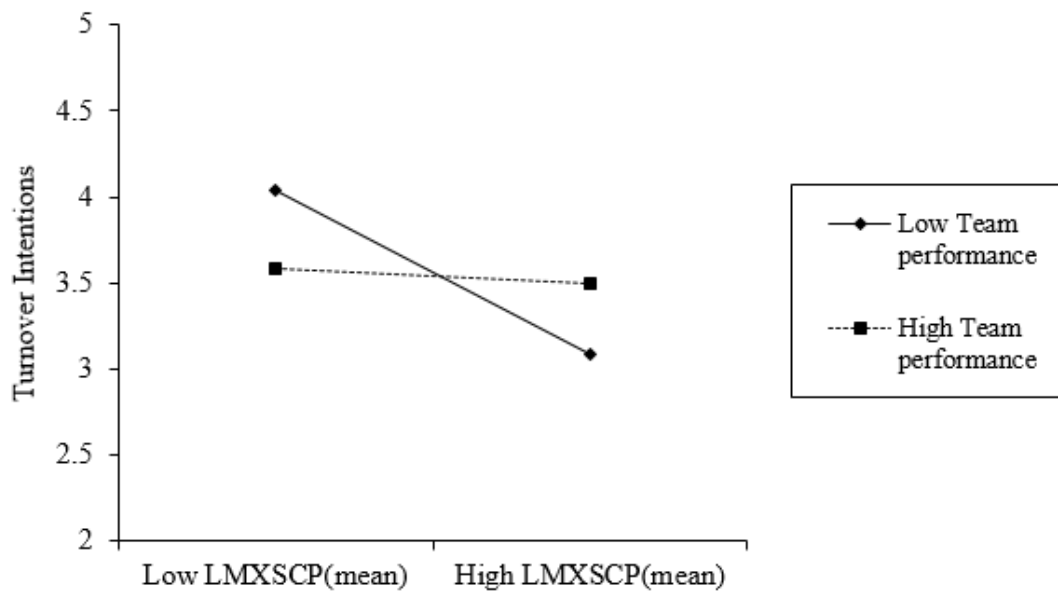
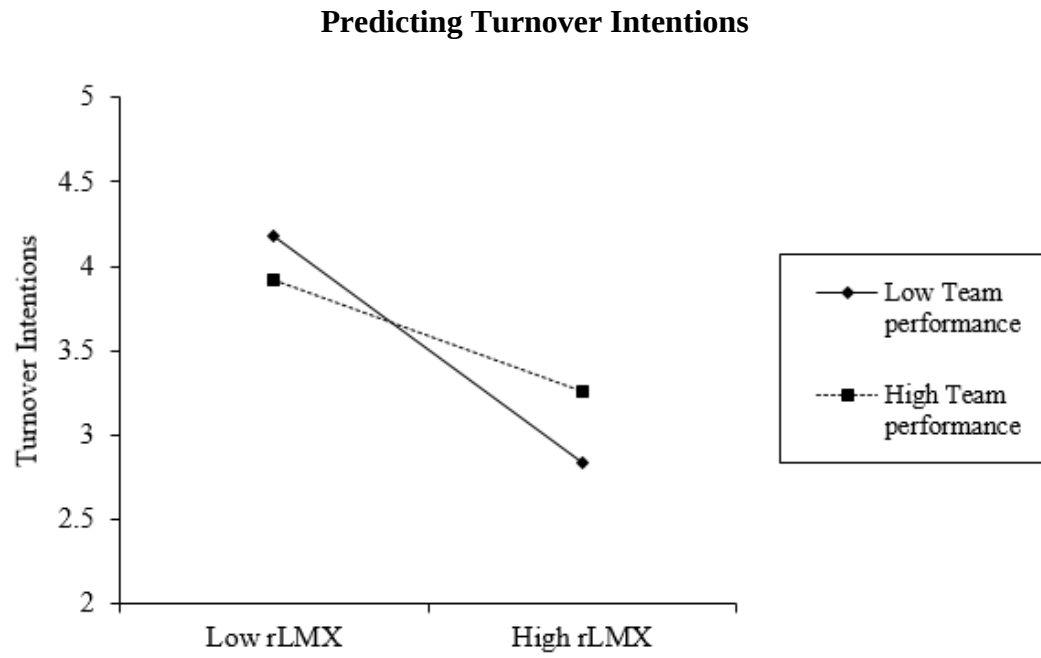


Figure 31 – Cross-level Interaction between rLMX and Team Performance



DISCUSSION

In this dissertation, I drew upon Keltner, et al. (2003) power-approach theory to extend our understanding of LMX by examining how perceptions of LMX differences between a focal employee and each referent coworker influences a discretionary interpersonal behaviors. Specifically, I theorized that LMX social comparisons between a focal employee and a referent coworker influences a focal employee's sense of power in his or her work relationship with the referent coworker. Subsequently, one's sense of power influences the extent that the focal employee engages in helpful or harmful interpersonal behaviors (citizenship and CWB) towards a referent coworker. I collected and analyzed data from 147 focal employees and 552 work relationships with other coworkers to test my hypotheses. In the discussion below, I provide a summary of my findings, followed by a discussion of my contributions, the strengths and limitations of this study, and future research directions.

Summary of Findings

The hypotheses from my proposed conceptual model were largely unsupported. I did find evidence that supported the prediction that a focal employee's direct perceptual measure of LMX differences with a referent coworker (LMXSCP) was positively related to his or her sense of power in a coworker relationship (Hypothesis 1). The results did demonstrate a significant moderating effects of task interdependence between coworkers, however the nature of this relationship was counter to my original predictions (Hypothesis 2). The hypotheses predicting the moderated relationships between sense of power and interpersonal behaviors (Hypotheses 3 and 4) were not supported. Subsequently, the moderated-mediation hypotheses (Hypotheses 5 and 6) were also not supported. These null findings may have occurred for various theoretical or empirical reasons.

With regards to theory, power-approach theory has predominantly been tested in experimental settings, where researchers can maximize the variance between the dependent and predictor variables. The extent that these effects translate to an organizational setting, where a number of individual and contextual factors may affect these relationships, may have been more difficult to capture. Although experimental designs are critical for understanding the causal effects of psychological power, in field settings it is difficult to address all of these factors succinctly (Sturm & Antonakis, 2015). Moreover, the primary method of manipulating high or low sense of power in laboratory studies has predominantly relied on a recall task (i.e., recall and write about a time that you felt powerful/powerless; see Galinsky, et al., 2003). As noted by Flynn, Gruenfeld, Molm, and Polzer (2011), this method of manipulating psychological power is “often difficult to interpret in real terms” because “recalling the experience of power may differ from actually having it” (p. 498). Additionally, Sturm and Antonakis (2015) argued that recall manipulations are not “ecologically valid” (p. 151), because awareness of the implicit aspects of psychological power may be the determinant of a participant’s behaviors (Orne, 2009).

With regards to empirical reasons, and aligned with how short-term experimental studies are designed, the relationship between psychological power and interpersonal behaviors may be driven by the circumstances of a specific event episode. In this study, however, I was only able to capture a snapshot of each focal employee’s views of his or her relationship and interactions with a referent coworker as an aggregate. That is, the work relationships between a focal employee and referent coworkers include multiple interaction events over time. The totality of these interactions are likely to influence each individual’s perceptions of their work relationship with others.

Supplemental Analyses. Despite the lack of support for my hypotheses, the results from my supplemental analyses reveal several interesting insights. First, the use of other-reported behavioral outcomes may have limited the extent that I could find the effects proposed in my theoretical model. My argument that LMX differences should be examined from a relational perspective is grounded in the idea that focal employees perceived, interpret, and respond to their social environment differently. This may also be true for interpersonal behaviors as well, suggesting that there may be other unobserved factors that may affect the extent that a coworker perceives interpersonal behaviors from others accurately. In support of this idea, my supplemental analyses provide some indication that several elements of my proposed mediation model may hold when replacing other-reported interpersonal behaviors (from the focal employee) with self-reported interpersonal behaviors (towards a referent coworker). Specifically, in Tables 10-11, I found evidence that sense of power mediates the positive relationship between LMXSCP and self-reported citizenship. In addition, results presented in Tables 13-14 suggest that this mediation effect is moderated by task interdependence, such that the mediation effect is significantly stronger at higher levels and weaker at lower levels.

Second, when drawing comparisons between my proposed approach and existing approaches to studying LMX differences, my supplemental analyses show that the LMXSCP approach can, generally, explain a greater proportion of the variance in individual-level outcomes (citizenship, CWB, task performance, affective commitment, job satisfaction)¹. This is evident by the R^2 presented in Tables 22-23. Specifically, I found that the different components that make up the relational-level scores (mean, standard deviation, and interaction between the two) explain significant variance in individual-level outcomes, either individually or in

¹ The notable exception is turnover intentions, which my analyses suggest that relative LMX (i.e., the group-mean centered scores of LMX quality in a work unit) explains the most variability.

combination. Most importantly, these results do not suggest that any single component consistently accounted for variability across the outcomes measured. Instead, different components (e.g., sometimes the mean, sometimes the standard deviation) explained the most variance in outcomes, which would not have been explained by prior approaches of LMX differences. For example, Table 22 shows that the standard deviation score of LMXSCP was the only significant predictor, whereas none of the prior approaches significant explained variability in interpersonal CWB. This supports my argument that important variability is missed when one makes the assumption that LMX differences exerts the same influence across all of a focal employee's work relationships, a critical issue highlighted in my review of the literature.

Finally, my supplemental analyses also examined the cross-level interactive effects of LMX differences measures (i.e., LMXSCP, LMXSC, rLMX, and LMXRS) and team-level variables (i.e., authority differentiation, skill differentiation, temporal stability, team viability, and team performance) in predicting individual outcomes (Figures 7-31). As an aggregate, it is clear that team-level factors are important boundary conditions for LMX differentiation research to consider. However, a larger concern is that different operationalizations of LMX differences may yield inconsistent results. In general, direct perceptual measures (i.e., LMXSCP and LMXSC) were largely consistent, with respect to the pattern of interaction relationships. Relative LMX, an indirect measure, also had similar patterns of interactions (when multiple measures of LMX differences served as significant cross-level moderators), suggesting that rLMX is, more often than not, aligned with direct perceptual measures of LMX differences. However, LMX relational separation (LMXRS) seems to have divergent results, often revealing relationships that were counter to the other measures.

Contributions

By extending LMX differentiation research to the relational level and examining how each focal employee compares his or her LMX quality with the leader to each referent coworker, this dissertation answers the call to extend LMX research beyond the LMX dyad. Despite the lack of support for several of my hypothesized relationships, my dissertation provides several important contributions to the literature.

First, this study provides a bridge between research on LMX and psychological power. The positive relationship between LMXSCP and sense of power suggest that theories on psychological power may serve as a useful theoretical framework to explain how employees interpret LMX perceptions. This provides an alternative theoretical framework for researchers to build upon, in contrast to the heavy reliance on role theory and social exchange theory in the existing literature. Although my downstream predictions regarding how psychological power relates to interpersonal behaviors were not supported, there are a number of other constructs of interest to organizational researchers that research on psychological power can speak to. For example, recent studies have found that psychological power interacts with other perceptual constructs (e.g., status) to importantly predict interpersonal conflict (Anicich, Fast, Halevy, & Galinsky, 2016) and organizational justice (Blader & Chen, 2012). Therefore, future research may seek to build upon the link this dissertation established between LMX differences and sense of power to examine other relevant constructs in organizational research.

Second, the results from my analyses demonstrate the importance of studying LMX differences, psychological power, and interpersonal behaviors at the relational level of analysis. This is evident by over 50% of the variance existing at this level of analysis, suggesting that there may be important differences in these constructs across each relationship an employee has

with others in the work environment. This is in stark contrast to how existing research has generally conceptualized each of these constructs. For example, research on LMX quality has found a general positive relationship between LMX and citizenship behaviors (e.g., Ilies, et al., 2007). Yet, these findings do not seem to hold at the relational-level, suggesting that, despite an employee having higher LMX quality than other coworkers, the extent that he or she engages in citizenship towards each coworker may depend on other factors that has yet to be uncovered. Thus, future research should seek to investigate how and when LMX relationships leads to interpersonal citizenship.

Finally, my supplemental analyses provide evidence that changing the comparison referent from a focal employee's coworkers as an aggregate to individual referent coworkers can account for more of the variance in individual-level outcomes, including affective commitment, job satisfaction, and task performance. Specifically, the LMXSCP approach breaks down LMX differences into a mean and variability component, aggregated from the relational-level to the individual-level, opposed to making the implicit assumption that individual views of their work relationships are consistent within the workgroup. Thus, the LMXSCP approach not only serves as a method to explore the dynamics of LMX comparisons within an employee's work relationships, but also can account for a greater proportion of the variability in work outcomes.

Practical Implications

This dissertation also offers some practical implications for managers and their organizations, specifically when managers should enact more or less differentiation within their workgroups. First, the purpose of differentiation, as discussed previously, is for a leader to allocate the resources at his or her disposal in the most effective manner for the workgroup. Doing so, however, also creates an informal hierarchy within the work unit such that higher

LMX members experience a greater sense of psychological power over others. Although I do not find support for the direct effects of psychological power on interpersonal citizenship and CWB, the burgeoning number of studies on psychological power suggests that individuals who experience a greater sense of power may treat others in a more interpersonally *insensitive* or disparaging manner. Indeed, results from my supplemental analyses suggests that employees who perceive higher levels of LMX differences are more likely to engage in counterproductive work behaviors under certain situations, such as when skill differences are low within the work unit. Thus, leaders need to be keenly aware of the downstream psychological consequences associated with their resource allocation decisions, particularly as it affects effective group processes.

Second, organizations need to understand that LMX differentiation is a common phenomenon that occurs within workgroups. The results of this dissertation demonstrate how team-level factors can influence how LMX differences affect employee outcomes. For example, LMX differences seems to lead to greater levels of CWBs when skill differentiation is high, whereas when skill differentiation is low, LMX differences reduces CWBs within the work unit. As such, organizations should seek to incorporate training modules that help leaders understand the implications of their resource allocation decisions within a work unit such that managers can actively engage in the selective application of LMX differentiation.

Strengths, Limitations, and Future Research Directions

Although my dissertation has several notable strengths, such as taking a more nuanced approach to characterizing work relationships, collecting data using multiple sources and separated by two time points, and using a field sample to test my hypotheses, there are limitations that should be noted. First, although the design of this study separated predictors from

outcomes, it does not allow for testing the causal direction of my predicted relationships. My hypotheses are derived, however, from an emerging literature built upon experimental studies that were designed to test the causal nature that underlie my predictions.

Second, this dissertation was based on data collected solely from traditional face-to-face workgroups. The prevalence of technology in the workplace has given rise to workgroups with members that are geographically dispersed across different parts of the world (Miles & Hollenbeck, 2014; Townsend, DeMarie, & Hendrickson, 1998). As a result, workgroups are increasingly relying upon virtual modalities of communication to coordinate their task activities. Specifically, issues such as time zone differences, richness of virtual modality, and synchrony of communication may importantly affect how coworkers perceive and interpret the meaning and actions of others (Montoya-Weiss, Massey, & Song, 2001; Schaubroeck & Yu, 2017). Indeed, research has found evidence that higher levels of team virtuality attenuates the positive effects of LMX on performance (Hoch & Kozlowski, 2014), yet can increase psychological empowerment in employees leading to positive job attitudes (Hill, Kang, & Seo, 2014). Therefore, how individuals' perceive and interpret LMX dynamics in workgroups that use lower or higher levels of virtuality may hold important implications for future research and practice.

Finally, the data from this study is a representation of the work relationship between coworkers at a static point time. That is, I do not have prior knowledge about the nature and characteristics that underlie each work relationship, nor am I able consider how each relationship developed or the trajectory that it is headed in. Specifically, scholars have noted value in separating instrumental and affective bases of work relationships (Ingram & Zou, 2008; Kuwabara, Luo, & Sheldon, 2010), a distinction that has yet to achieve prominence in the LMX literature. Moreover, work relationships take time to evolve through different phases (Ferris, et

al., 2009; Liden, et al., 2016), which may vary as a function of the two parties who are involved in the relationship. This is a notable issue in field samples examining work relationships, as it is difficult to measure the corresponding individual and contextual factors that may affect the development and maintenance of work relationships between focal employees and referent coworkers.

CONCLUSION

Leader-member exchange remains one of the most popular and well-researched topics in leadership research. The majority of the literature has myopically focused on the leader-member dyad and examined this phenomena at the individual or group level of analysis. The results from this dissertation suggest that LMX research should be extended to examine how employees perceive, interpret, and respond to LMX differences with other coworkers. Moreover, the considerable amount of variability that exists at the relational-level suggests that differences in LMX relationships need to be studied between each dyadic work relationship.

APPENDICES

APPENDIX A

Supplemental Analyses

Table 24 – Authority Differentiation as a Moderator of the Relationship between LMX Differences on Interpersonal Behaviors and Task Performance

Variable	Interpersonal citizenship		Interpersonal CWB		Task performance	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.09	.09	.06	.07	.53*	.06
LMXSCP _(sd) ^a	.10	.16	.12	.13	-.30*	.11
<i>Level-2</i>						
Authority differentiation (AD)	-.15*	.07	.22*	.06	.01	.04
LMXSCP _(mean) x AD	-.06	.05	.05	.04	-.01	.04
Intercept	3.78*	.11	2.35*	.09	4.36*	.07
<i>Level-1</i>						
LMXSCP _(mean) ^a	.06	.08	.10	.07	.53*	.06
LMXSCP _(sd) ^a	.13	.18	.06	.14	-.34*	.12
<i>Level-2</i>						
Authority differentiation (AD)	-.14*	.07	.23*	.06	.01	.04
LMXSCP _(sd) x AD	-.01	.10	.08	.08	.06	.07
Intercept	3.79*	.12	2.32*	.10	4.34*	.08
<i>Level-1</i>						
LMX social comparison (LMXSC)	.06	.07	.04	.05	.39*	.05
<i>Level-2</i>						
Authority differentiation (AD)	-.14*	.06	.23*	.05	-.05	.04
LMXSC x AD	-.06	.04	.05 [†]	.03	-.02	.03
Intercept	3.79*	.11	2.35*	.09	4.36*	.07
<i>Level-1</i>						
Relative LMX (rLMX)	-.06	.08	.03	.06	.33*	.07
<i>Level-2</i>						
Authority differentiation (AD)	-.13*	.06	.23*	.06	-.06	.04
<i>Cross-level interaction</i>						
rLMX x AD	.03	.04	-.01	.03	.05	.04
Intercept	3.79*	.11	2.35*	.10	4.37*	.07
<i>Level-1</i>						
LMX relational separation (LMXRS)	.06	.15	.06	.12	-.08	.11
<i>Level-2</i>						
Authority differentiation (AD)	-.13*	.07	.23*	.06	-.04	.04
LMXRS x AD	-.02	.08	.03	.07	-.13*	.06
Intercept	3.79*	.11	2.34*	.10	4.39*	.07

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

**Table 25 – Authority Differentiation as a Moderator of the Relationship between
LMX Differences on Job Attitudes**

Variable	Affective commitment		Job satisfaction		Turnover intentions	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.45*	.09	.27*	.08	-.18 [†]	.11
LMXSCP _(sd) ^a	-.35*	.16	-.39*	.15	.15	.20
<i>Level-2</i>						
Authority differentiation (AD)	-.13 [†]	.07	-.01	.08	.01	.10
LMXSCP _(mean) x AD	-.09 [†]	.05	.06	.04	-.15*	.06
Intercept	4.72*	.11	4.47*	.13	3.52*	.17
<i>Level-1</i>						
LMXSCP _(mean) ^a	.40*	.08	.28*	.07	-.27*	.10
LMXSCP _(sd) ^a	-.36*	.17	-.23	.16	.18	.23
<i>Level-2</i>						
Authority differentiation (AD)	-.12 [†]	.07	-.03	.07	.01	.10
LMXSCP _(sd) x AD	.04	.10	-.21*	.09	.01	.13
Intercept	4.72*	.11	4.53*	.13	3.54*	.17
<i>Level-1</i>						
LMX social comparison (LMXSC)	.26*	.07	.25*	.06	-.26*	.08
<i>Level-2</i>						
Authority differentiation (AD)	-.17*	.06	-.06	.07	.04	.10
LMXSC x AD	.01	.04	.05	.03	-.09*	.04
Intercept	4.74*	.11	4.46*	.13	3.54*	.18
<i>Level-1</i>						
Relative LMX (rLMX)	.32*	.08	.27*	.07	-.50*	.09
<i>Level-2</i>						
Authority differentiation (AD)	-.18*	.06	-.06	.07	.04	.10
rLMX x AD	.03	.04	.07*	.04	-.01	.05
Intercept	4.74*	.11	4.46*	.13	3.54*	.17
<i>Level-1</i>						
LMX relational separation (LMXRS)	.03	.16	-.25	.16	.49*	.21
<i>Level-2</i>						
Authority differentiation (AD)	-.17*	.07	-.05	.07	.02	.10
LMXRS x AD	-.03	.09	.07	.08	-.03	.11
Intercept	4.74*	.11	4.45*	.12	3.56*	.18

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

Table 26 – Skill Differentiation as a Moderator of the Relationship between LMX Differences on Interpersonal Behaviors and Task Performance

Variable	Interpersonal citizenship		Interpersonal CWB		Task performance	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.09	.10	-.01	.07	.58*	.07
LMXSCP _(sd) ^a	.05	.16	.17	.13	-.30*	.11
<i>Level-2</i>						
Skill differentiation (SD)	.03	.09	-.22*	.07	.03	.05
LMXSCP _(mean) x SD	.03	.07	-.14*	.05	.09 [†]	.05
Intercept	3.78*	.12	2.36*	.10	4.35*	.07
<i>Level-1</i>						
LMXSCP _(mean) ^a	.07	.08	.09	.07	.52*	.06
LMXSCP _(sd) ^a	.04	.16	.15	.13	-.29*	.11
<i>Level-2</i>						
Skill differentiation (SD)	.04	.09	-.23*	.07	.05	.05
LMXSCP _(sd) x SD	-.11	.10	-.05	.08	-.08	.07
Intercept	3.77*	.12	2.33*	.10	4.35*	.07
<i>Level-1</i>						
LMX social comparison (LMXSC)	.06	.07	.03	.05	.39*	.05
<i>Level-2</i>						
Skill differentiation (SD)	.05	.09	-.26*	.07	.13*	.05
LMXSC x SD	.08 [†]	.05	-.11*	.03	.04	.03
Intercept	3.80	.12	2.33*	.10	4.38*	.07
<i>Level-1</i>						
Relative LMX (rLMX)	-.05	.08	.03	.06	.34*	.07
<i>Level-2</i>						
Skill differentiation (SD)	.03	.09	-.24*	.08	.11*	.05
rLMX x SD	.02	.05	-.07 [†]	.04	.04	.05
Intercept	3.79*	.12	2.34*	.11	4.38*	.07
<i>Level-1</i>						
LMX relational separation (LMXRS)	-.01	.15	.01	.13	-.10	.11
<i>Level-2</i>						
Skill differentiation (SD)	.02	.09	-.24*	.08	.11 [†]	.05
LMXRS x SD	.18	.11	-.03	.09	.01	.08
Intercept	3.79*	.12	2.34*	.11	4.38*	.07

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

**Table 27 – Skill Differentiation as a Moderator of the Relationship between
LMX Differences on Job Attitudes**

Variable	Affective commitment		Job satisfaction		Turnover intentions	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.50*	.09	.19*	.08	-.26*	.12
LMXSCP _(sd) ^a	-.42*	.16	-.38*	.14	.18	.20
<i>Level-2</i>						
Skill differentiation (SD)	.01	.08	-.04	.10	-.05	.12
LMXSCP _(mean) x SD	.13 [†]	.07	-.17*	.06	.01	.08
Intercept	4.71*	.12	4.49	.13	3.53*	.17
<i>Level-1</i>						
LMXSCP _(mean) ^a	.41*	.08	.31*	.07	-.26*	.10
LMXSCP _(sd) ^a	-.39*	.16	-.42*	.15	.15	.21
<i>Level-2</i>						
Skill differentiation (SD)	.02	.08	-.06	.09	-.05	.12
LMXSCP _(sd) x SD	.02	.10	-.01	.10	-.10	.13
Intercept	4.74*	.12	4.46*	.13	3.52*	.17
<i>Level-1</i>						
LMX social comparison (LMXSC)	.27*	.07	.25*	.06	-.29*	.08
<i>Level-2</i>						
Skill differentiation (SD)	.10	.09	-.01	.09	-.10	.12
LMXSC x SD	.01	.05	-.08*	.04	.03	.05
Intercept	4.74*	.12	4.46*	.13	3.54*	.17
<i>Level-1</i>						
Relative LMX (rLMX)	.32*	.08	.27*	.06	-.51*	.09
<i>Level-2</i>						
Skill differentiation (SD)	.08	.09	.01	.09	-.09	.12
rLMX x SD	-.02	.05	-.20*	.04	-.07	.06
Intercept	4.74*	.12	4.46*	.13	3.54*	.17
<i>Level-1</i>						
LMX relational separation (LMXRS)	-.04	.16	-.27 [†]	.15	.49*	.21
<i>Level-2</i>						
Skill differentiation (SD)	.07	.09	-.01	.09	-.08	.13
LMXRS x SD	.20 [†]	.12	.12	.11	.04	.15
Intercept	4.74*	.12	4.46*	.12	3.55*	.18

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

**Table 28 – Temporal Stability as a Moderator of the Relationship between
LMX Differences on Interpersonal Behaviors and Task Performance**

Variable	Interpersonal citizenship		Interpersonal CWB		Task performance	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.07	.08	.07	.07	.51*	.06
LMXSCP _(sd) ^a	.03	.16	.18	.13	-.31*	.11
<i>Level-2</i>						
Temporal stability (TS)	-.16*	.08	.03	.08	.01	.05
LMXSCP _(mean) x TS	-.05	.05	-.01	.04	.05	.04
Intercept	3.82*	.11	2.35*	.11	4.36*	.07
<i>Level-1</i>						
LMXSCP _(mean) ^a	.06	.08	.07	.07	.52*	.06
LMXSCP _(sd) ^a	.02	.17	.18	.14	-.33*	.12
<i>Level-2</i>						
Temporal stability (TS)	-.16*	.08	.02	.08	.01	.05
LMXSCP _(sd) x TS	.01	.12	-.01	.10	.06	.08
Intercept	3.83*	.11	2.35*	.12	4.36*	.07
<i>Level-1</i>						
LMX social comparison (LMXSC)	.05	.07	.05	.05	.39*	.05
<i>Level-2</i>						
Temporal stability (TS)	-.17*	.08	.03	.08	.04	.05
LMXSC x TS	-.07†	.04	.03	.03	.01	.03
Intercept	3.80*	.12	2.36*	.12	4.35*	.08
<i>Level-1</i>						
Relative LMX (rLMX)	-.06	.08	.05	.06	.32*	.07
<i>Level-2</i>						
Temporal stability (TS)	-.16*	.08	.05	.08	-.03	.05
rLMX x TS	.01	.05	-.03	.04	.03	.04
Intercept	3.83*	.11	2.36*	.12	4.37*	.07
<i>Level-1</i>						
LMX relational separation (LMXRS)	.08	.16	.03	.14	-.08	.12
<i>Level-2</i>						
Temporal stability (TS)	-.18*	.08	.02	.09	-.01	.05
LMXRS x TS	.04	.09	-.01	.08	-.04	.07
Intercept	3.83*	.11	2.36*	.12	4.38*	.08

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

†*p* < .10, **p* < .05

**Table 29 – Temporal Stability as a Moderator of the Relationship between
LMX Differences on Job Attitudes**

Variable	Affective commitment		Job satisfaction		Turnover intentions	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.40*	.08	.30*	.07	-.24*	.10
LMXSCP _(sd) ^a	-.43*	.15	-.40*	.15	.23	.20
<i>Level-2</i>						
Temporal stability (TS)	-.17*	.07	-.12	.09	-.05	.11
LMXSCP _(mean) x TS	.03	.05	-.01	.05	-.14*	.07
Intercept	4.78*	.11	4.49*	.13	3.53*	.17
<i>Level-1</i>						
LMXSCP _(mean) ^a	.40*	.08	.31*	.07	-.26*	.10
LMXSCP _(sd) ^a	-.44*	.16	-.29 [†]	.15	.28	.21
<i>Level-2</i>						
Temporal stability (TS)	-.16*	.07	-.13	.09	-.05	.12
LMXSCP _(sd) x TS	.04	.12	-.22*	.11	-.17	.15
Intercept	4.78*	.11	4.49*	.12	3.55*	.17
<i>Level-1</i>						
LMX social comparison (LMXSC)	.24*	.07	.27*	.06	-.29*	.08
<i>Level-2</i>						
Temporal stability (TS)	-.15 [†]	.08	-.09	.09	-.08	.12
LMXSC x TS	.02	.04	-.01	.04	-.03	.05
Intercept	4.78*	.12	4.48 [†]	.13	3.55 [†]	.17
<i>Level-1</i>						
Relative LMX (rLMX)	.33*	.08	.31*	.07	-.47*	.09
<i>Level-2</i>						
Temporal stability (TS)	-.19*	.08	-.14	.09	-.03	.12
rLMX x TS	-.01	.05	-.05	.04	-.06	.05
Intercept	4.78*	.12	4.50*	.13	3.55*	.17
<i>Level-1</i>						
LMX relational separation (LMXRS)	.08	.16	-.31*	.16	.55*	.22
<i>Level-2</i>						
Temporal stability (TS)	-.18*	.08	-.15 [†]	.09	-.06	.13
LMXRS x TS	-.07	.10	.22*	.10	-.08	.13
Intercept	4.80*	.11	4.45*	.12	3.59*	.18

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

Table 30 – Team Viability as a Moderator of the Relationship between LMX Differences on Interpersonal Behaviors and Task Performance

Variable	Interpersonal citizenship		Interpersonal CWB		Task performance	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.09	.09	.08	.07	.52*	.06
LMXSCP _(sd) ^a	.06	.16	.16	.13	-.25*	.11
<i>Level-2</i>						
Team viability (TV)	.15	.13	-.43*	.11	.17*	.08
LMXSCP _(mean) x TV	.06	.09	.13	.12	-.18 [†]	.10
Intercept	3.78*	.12	2.38*	.10	4.34*	.07
<i>Level-1</i>						
LMXSCP _(mean) ^a	.07	.08	.08	.07	.52*	.06
LMXSCP _(sd) ^a	.08	.16	.16	.13	-.25*	.11
<i>Level-2</i>						
Team viability (TV)	.21	.14	-.43*	.11	.17*	.08
LMXSCP _(sd) x TV	-.25	.15	.13	.12	-.18 [†]	.10
Intercept	3.75*	.12	2.38*	.10	4.34*	.07
<i>Level-1</i>						
LMX social comparison (LMXSC)	.05	.07	.04	.05	.39*	.05
<i>Level-2</i>						
Team viability (TV)	.16	.13	-.41*	.11	.26*	.08
LMXSC x TV	.05	.07	-.04	.06	-.02	.05
Intercept	3.79*	.12	2.36*	.10	4.35*	.07
<i>Level-1</i>						
Relative LMX (rLMX)	-.06	.08	.03	.06	.35*	.06
<i>Level-2</i>						
Team viability (TV)	.15	.13	-.42*	.11	.18*	.08
rLMX x TV	.01	.10	-.01	.08	-.20*	.09
Intercept	3.78*	.12	2.37*	.10	4.36*	.07
<i>Level-1</i>						
LMX relational separation (LMXRS)	-.03	.15	.04	.12	-.14	.11
<i>Level-2</i>						
Team viability (TV)	.23 [†]	.14	-.49*	.11	.25*	.09
LMXRS x TV	.37 [†]	.19	-.35*	.16	.32*	.14
Intercept	3.78*	.12	2.37*	.10	4.36*	.07

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

**Table 31 – Team Viability as a Moderator of the Relationship between
LMX Differences on Job Attitudes**

Variable	Affective commitment		Job satisfaction		Turnover intentions	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.43*	.09	.30*	.08	-.22*	.11
LMXSCP _(sd) ^a	.38*	.16	-.39*	.15	.15	.20
<i>Level-2</i>						
Team viability (TV)	.16	.13	.09	.14	-.19	.19
LMXSCP _(mean) x TV	.04	.09	.01	.08	.13	.11
Intercept	4.73*	.11	4.46*	.13	3.54*	.17
<i>Level-1</i>						
LMXSCP _(mean) ^a	.41*	.08	.30*	.07	-.26*	.10
LMXSCP _(sd) ^a	-.37*	.16	-.36*	.14	.16	.20
<i>Level-2</i>						
Team viability (TV)	.19	.13	.01	.14	-.19	.19
LMXSCP _(sd) x TV	-.15	.15	.40*	.14	-.01	.20
Intercept	4.71*	.11	4.50*	.12	3.54*	.17
<i>Level-1</i>						
LMX social comparison (LMXSC)	.28*	.07	.28*	.06	-.31*	.08
<i>Level-2</i>						
Team viability (TV)	.29*	.13	.22	.14	-.30	.18
LMXSC x TV	-.02	.07	.03	.06	-.02	.09
Intercept	4.72*	.12	4.46*	.13	3.54*	.17
<i>Level-1</i>						
Relative LMX (rLMX)	.33*	.08	.29*	.07	-.51*	.09
<i>Level-2</i>						
Team viability (TV)	.22 [†]	.13	.15	.14	-.22	.18
rLMX x TV	-.18 [†]	.10	-.14	.09	.10	.11
Intercept	4.73*	.12	4.46*	.13	3.55*	.16
<i>Level-1</i>						
LMX relational separation (LMXRS)	-.06	.16	-.26 [†]	.16	.50*	.21
<i>Level-2</i>						
Team viability (TV)	.26 [†]	.14	.16	.14	-.26	.20
LMXRS x TV	.17	.21	.05	.20	-.19	.26
Intercept	4.73*	.12	4.45*	.12	3.56*	.17

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

**Table 32 – Team Performance as a Moderator of the Relationship between
LMX Differences on Interpersonal Behaviors and Task Performance**

Variable	Interpersonal citizenship		Interpersonal CWB		Task performance	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.07	.08	.07	.06	.52*	.06
LMXSCP _(sd) ^a	.05	.15	.16	.13	-.30*	.11
<i>Level-2</i>						
Team performance (TP)	-.01	.12	-.07	.11	.12 [†]	.07
LMXSCP _(mean) x TP	-.07	.08	.17*	.06	-.15*	.05
Intercept	3.78*	.12	2.36*	.11	4.36*	
<i>Level-1</i>						
LMXSCP _(mean) ^a	.07	.08	.06	.07	.52*	.06
LMXSCP _(sd) ^a	.05	.16	.17	.13	-.30*	.11
<i>Level-2</i>						
Team performance (TP)	-.01	.12	-.03	.11	.10	.07
LMXSCP _(sd) x TP	-.05	.16	.24 [†]	.13	-.07	.11
Intercept	3.78*	.12	2.35*	.11	4.37*	.07
<i>Level-1</i>						
LMX social comparison (LMXSC)	.03	.06	.06	.05	.39*	.05
<i>Level-2</i>						
Team performance (TP)	-.02	.12	-.05	.12	.01	.08
<i>Cross-level interaction</i>						
LMXSC x TP	-.08	.06	.11*	.05	-.11*	.04
Intercept	3.79*	.12	2.34*	.12	4.37*	.08
<i>Level-1</i>						
Relative LMX (rLMX)	-.07	.08	.05	.06	.32*	.07
<i>Level-2</i>						
Team performance (TP)	-.01	.12	-.05	.12	.07	.07
<i>Cross-level interaction</i>						
rLMX x TP	-.08	.07	.11*	.06	-.13*	.06
Intercept	3.78*	.11	2.36*	.12	4.37*	.07
<i>Level-1</i>						
LMX relational separation (LMXRS)	.02	.16	.01	.14	-.07	.11
<i>Level-2</i>						
Team performance (TP)	-.02	.12	-.04	.12	.05	.07
<i>Cross-level interaction</i>						
LMXRS x TP	.09	.15	-.14	.13	.14	.11
Intercept	3.79*	.12	2.35*	.12	4.38*	.07

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

Table 33 – Team Performance as a Moderator of the Relationship between LMX

Differences on Job Attitudes

Variable	Affective commitment		Job satisfaction		Turnover intentions	
	<i>b</i>	s.e.	<i>b</i>	s.e.	<i>b</i>	s.e.
<i>Level-1</i>						
LMXSCP _(mean) ^a	.41*	.08	.31*	.07	-.26*	.10
LMXSCP _(sd) ^a	-.41*	.16	-.40*	.15	.19	.20
<i>Level-2</i>						
Team performance (TP)	.12	.11	.03	.13	-.01	.17
LMXSCP _(mean) x TP	-.11	.08	.08	.07	.21*	.09
Intercept	4.73*	.11	4.47*	.13	3.55*	.17
<i>Level-1</i>						
LMXSCP _(mean) ^a	.42*	.08	.30*	.07	-.27*	.10
LMXSCP _(sd) ^a	-.42*	.15	-.40*	.15	.19	.20
<i>Level-2</i>						
Team performance (TP)	.09	.11	.05	.13	.04	.17
LMXSCP _(sd) x TP	-.26	.16	.17	.14	.24	.20
Intercept	4.74*	.11	4.46*	.13	3.54*	.17
<i>Level-1</i>						
LMX social comparison (LMXSC)	.27*	.07	.27*	.06	-.30*	.08
<i>Level-2</i>						
Team performance (TP)	.04	.12	-.02	.13	.08	.17
LMXSC x TP	-.05	.06	.04	.06	.04	.07
Intercept	4.74*	.12	4.46*	.13	3.54*	.17
<i>Level-1</i>						
Relative LMX (rLMX)	.31*	.08	.30*	.07	-.48*	.09
<i>Level-2</i>						
Team performance (TP)	.08	.12	.02	.13	.04	.17
rLMX x TP	-.04	.08	.13 [†]	.06	.16*	.08
Intercept	4.74*	.12	4.46*	.13	3.55*	.17
<i>Level-1</i>						
LMX relational separation (LMXRS)	-.03	.17	-.25	.16	.46*	.21
<i>Level-2</i>						
Team performance (TP)	.08	.13	-.01	.12	.10	.18
LMXRS x TP	.01	.16	.02	.15	-.29	.20
Intercept	4.74*	.13	4.46*	.12	3.54*	.18

Notes. N = 147; ^aaggregated from level-1 behaviors; ^bsupervisor ratings

[†]*p* < .10, **p* < .05

APPENDIX B

Measures

LMX Social Comparison - Peers (5-items)

All items were adapted from the LMXSC measure reported in Vidyarthi, et al. (2010) and use the instructions and scale anchors below:

Source: Vidyarthi, P. R., Liden, R. C., Anand, S., Erdogan, B., & Ghosh, S. (2010). Where do I stand? Examining the effects of leader-member exchange social comparison on employee work behaviors. *Journal of Applied Psychology*, 95, 849-861.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. Relative to _____, I receive more support from my manager.”
2. I have a better work relationship with my manager than _____.
3. Compared to _____, I receive more support from my manager.
4. The work relationship I have with my manager is more effective than the relationship that _____ has with my manager.
5. My manager would be more loyal to me than _____.

Task Interdependence (3-items)

All items were adapted from the task interdependence measure reported in Pearce and Gregersen (1991) and use the instructions and scale anchors below:

Source: Pearce, J. L., & Gregersen, H. B. (1991). Task interdependence and extrarole behavior: A test of the mediating effects of felt responsibility. *Journal of Applied Psychology*, 76, 838-844.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. I frequently coordinate my efforts with _____ to accomplish my work.
2. The way I perform my work has a significant impact on _____'s work.
3. My task performance depends on receiving accurate information from _____.

Sense of Power (3-items)

All items were adapted from the sense of power measure reported in Anderson, et al. (2012) and use the instructions and scale anchors below:

Source: Anderson, C., John, O. P., & Keltner, D. (2012). The personal sense of power. *Journal of Personality*, 80, 313-344.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

In my interactions with _____ ...

1. I can get _____ to listen to what I say.
2. I can get _____ to do what I want.
3. I have a great deal of power in my relationship with _____.

Prosocial Motivation (4-items)

All items were taken from the prosocial motivation measure reported in Grant (2008b) and use the instructions and scale anchors below:

Source: Grant, A. M. (2008). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology*, 93, 108-124.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

Why are you motivated to do your work?

1. Because I care about benefiting others through my work.
2. Because I want to help others through my work.
3. Because I want to have a positive impact on others.
4. Because it is important to me to do good for others through my work.

Work-based Efficacy (4-items)

All items were adapted from the generalized self-efficacy measure reported in Chen, Gully, et al. (2001) and use the instructions and scale anchors below:

Source: Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, 4, 62-83.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*,
5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. I am confident that I can perform any tasks assigned to me at work.
2. Compared to my coworkers, I can do most tasks very well.
3. When facing difficult tasks, I am certain that I will accomplish them.
4. I can complete any tasks that my manager assigns me.

Interpersonal Citizenship Behaviors (4-items)

All items were adapted from the interpersonal citizenship behavior measure reported in Settoon and Mossholder (2002) and use the instructions and scale anchors below:

Source: Settoon, R. P., & Mossholder, K. W. (2002). Relationship quality and relationship context as antecedents of person- and task-focused interpersonal citizenship behavior. *Journal of Applied Psychology*, 87, 255-267.

Scale Anchors:

1 = *Never*, 2 = *Very rarely*, 3 = *Rarely*, 4 = *Sometimes*, 5 = *Often*, 6 = *Very often*, 7 = *Always*

Instructions:

Indicate the extent that each coworker engages in the following behaviors to you at work.

1. _____ takes on extra responsibilities to help me when things get demanding at work.
2. _____ helps me with difficult work tasks, even if assistance is not directly requested.
3. _____ listens to me when I have something to get off my chest at work.
4. _____ takes the time to listen to my problems and worries at work.

Interpersonal Counterproductive Work Behaviors (4-items)

All items were adapted from the counterproductive work behavior measure reported in Ferris, et al. (2016) and use the instructions and scale anchors below:

Source: Ferris, D.L., Yan, M., Lim, V.K.G., Chen, Y., & Fatimah, S. (2016). An approach-avoidance framework of workplace aggression. *Academy of Management Journal*, 59(5), 1777-1800.

Scale Anchors:

1 = *Never*, 2 = *Very rarely*, 3 = *Rarely*, 4 = *Sometimes*, 5 = *Often*, 6 = *Very often*, 7 = *Always*

Instructions:

Indicate the extent that _____ engages in the following behaviors to you at work.

1. Said something hurtful to me at work.
2. Gossips about me at work.
3. Acts rudely towards me at work.
4. Made fun of me at work.

Leader-Member Exchange (7-items)

All items were taken from the LMX-7 measure reported in Liden, et al. (1993) and use the instructions and scale anchors below:

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

Scale Anchors:

Item 1 uses the scale anchors:

1 = *very ineffective*, 2 = *ineffective*, 3 = *slightly ineffective*, 4 = *neutral*, 5 = *slightly effective*, 6 = *effective*, 7 = *very effective*

Items 2-7 uses the scale anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. How would you describe your working relationship with your supervisor?
2. My supervisor recognizes my potential.
3. I can count on my supervisor to “bail me out,” even at her/his own expense, when I really need it.
4. My supervisor understands my problems and needs.
5. My supervisor has enough confidence in me that s/he would defend and justify my decisions if I were not present to do so.
6. I usually know where I stand with my supervisor.
7. Regardless of how much power s/he has built into her/his position, my supervisor would be personally inclined to use her/his power to help me solve problems in my work.

LMX Social Comparisons (6-items)

All items were taken from the LMXSC measure reported in Vidyarthi, et al. (2010) and use the instructions and scale anchors below:

Source: Vidyarthi, P. R., Liden, R. C., Anand, S., Erdogan, B., & Ghosh, S. (2010). Where do I stand? Examining the effects of leader-member exchange social comparison on employee work behaviors. *Journal of Applied Psychology*, 95, 849-861.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. I have a better relationship with my manager than most others in my workgroup.
2. Relative to the other sin my workgroup, I receive more support from my manager.
3. The working relationship I have with my manager is more effective than the relationships most members of my group have with my manager.
4. My manager is more loyal to me compared to my coworkers.
5. My manager enjoys my company more than s/he enjoys the company of other group members.
6. When my manager cannot make it to an important meeting, it is likely that s/he will ask me to fill in.

Affective Commitment (4-items)

All items were taken from the affective commitment measure reported in Allen and Meyer (1990) and use the instructions and scale anchors below:

Source: Allen, N.J., & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1-18.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. I feel a strong sense of belongingness to my organization.
2. I feel 'emotionally attached' to my organization.
3. The organization I work for has a great deal of personal meaning for me.
4. I really feel as if my organization's problems are my own.

Job Satisfaction (3-items)

All items were adapted from the job satisfaction measure reported in Brayfield and Rothe (1951) and use the instructions and scale anchors below:

Source: Brayfield, A.H., & Rothe, H.F. (1951). An index of job satisfaction. *Journal of Applied Psychology*, 35(5), 307-311.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. Overall, I am satisfied with my job.
2. I find real enjoyment in my job.
3. I definitely dislike my job. (R)

Turnover Intentions (3-items)

All items were taken from the turnover intentions measure reported in Kelloway, et al. (1999) and use the instructions and scale anchors below:

Source: Kelloway, E.K., Gottlieb, B.H., & Barham, L. (1999). The source, nature, and direction of work and family conflict: A longitudinal investigation. *Journal of Occupational Health Psychology*, 4(4), 337-346.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. I am planning to look for a new job.
2. I intend to ask people about new job opportunities.
3. I don't plan to be with my organization much longer.

Task Performance (3-items)

All items were taken from the task performance measure reported in Griffin, et al. (2007) and use the instructions and scale anchors below:

Source: Griffin, M.A., Neal, A., & Parker, S.K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, 50, 327-347.

Scale Anchors:

1 = *Never*, 2 = *Very rarely*, 3 = *Rarely*, 4 = *Sometimes*, 5 = *Often*, 6 = *Very often*, 7 = *Always*

Instructions:

Indicate the extent that each subordinate engages in the following behaviors:

1. _____ carries out the core parts of his/her job well.
2. _____ completes his/her core tasks well using standard procedures.
3. _____ ensures that his/her tasks are completed properly.

Team Descriptive Index – Authority Differentiation

Source: Lee, S.M., Koopman, J., Hollenbeck, J.R., Wang, L.C., & Lanaj, K. (2015). The team descriptive index (TDI): A multidimensional scaling approach for team description. *Academy of Management Discoveries*, 1, 88-113.

Instructions:

Please read each statement carefully and select the single most appropriate number on the 1-to-9 scale provided below that best describes your team.

Authority differentiation refers to the degree to which decision-making responsibilities are vested in a single person versus the work unit as a whole. That is, how group decisions are made in the face of disagreement or differences of opinion.

Groups high on this dimension have a very strong supervisor/group leader, relative to other members in the work unit, in terms of making decisions for the work unit.

Groups low on this dimension have members that have equal amounts of power in making decisions for the work unit.

Scale:

9 – Very High. There is one group member who is formally recognized as the official team leader and this person makes most, if not all, of the decisions autocratically, often after no input or input from just one or two group members.

8.

7 – High. There is one group member who is formally recognized as the official team leader and this person generally seeks input from most, but not all, group members on decisions and would often delegate decisions.

6.

5 – Medium. The group votes on a leader, and although this person has critical task knowledge and interpersonal skills, they could also be voted out, and so they usually seek input from all of the group members prior to making decisions.

4.

3 – Low. There is no formal leader, but one team member almost always emerges as the informal leader most of the time. This person possesses critical task knowledge and interpersonal skills, but seeks input from all group members prior to making decisions.

2.

1 – Very Low. There is no real leader; all members have equal amounts of influence and different individuals emerge as leaders at different times depending on the nature of the task, the situation, or the schedules of other group members.

Team Descriptive Index – Skill Differentiation

Source: Lee, S.M., Koopman, J., Hollenbeck, J.R., Wang, L.C., & Lanaj, K. (2015). The team descriptive index (TDI): A multidimensional scaling approach for team description. *Academy of Management Discoveries*, 1, 88-113.

Instructions:

Please read each statement carefully and select the single most appropriate number on the 1-to-9 scale provided below that best describes your team.

Skill differentiation refers to the degree that members have specialized knowledge or functional expertise that make it difficult to substitute one member for another.

Groups high on this dimension typically takes a long time to develop the abilities associated with specific roles, and thus people are not easily interchangeable.

Groups low on this dimension have members who are more easily substituted for one another, such that individuals are not bound to one specific role.

Scale:

9 – Very High. Group members have unique skills *and* unique contacts with people inside *and* outside the organization that make it impossible to substitute one member for another.

8.

7 – High. Group members have unique skills *or* unique contacts with people inside *or* outside the organization that make it very difficult to substitute one member for another.

6.

5 – Medium. Group members have a core set of skills and contacts that they all share, but each person also has some small unique skill and/or set of contacts that make it somewhat difficult to substitute one member for another.

4.

3 – Low. Group members are fully cross-trained, and although some tasks were complex, almost all members can do almost all of the tasks if needed, and thus substitution is usually possible.

2.

1 – Very Low. Group members are fully cross-trained or the tasks are so simple that even untrained people could perform almost all of the tasks almost all of the time. It is easy to substitute one member for another.

Team Descriptive Index – Temporal Stability

Source: Lee, S.M., Koopman, J., Hollenbeck, J.R., Wang, L.C., & Lanaj, K. (2015). The team descriptive index (TDI): A multidimensional scaling approach for team description. *Academy of Management Discoveries*, 1, 88-113.

Instructions:

Please read each statement carefully and select the single most appropriate number on the 1-to-9 scale provided below that best describes your team.

Temporal stability refers to the degree to which membership in the group is stable over time and characterized by fixed boundaries making it difficult to join or leave the work unit.

Groups high on this dimension are stable in the long term and membership does not change often or very easily.

Groups low on this dimension are new or unstable, and people are often unfamiliar with one another. Changes in membership occur frequently, and individuals are coming or going so quickly that it is hard to know who is in the work unit at any given time.

Scale:

9 – Very High. This workgroup has been together for a very long time (e.g., two or more years) and is very likely to be together for a long time into the future (two or more years). Group members are very familiar with each other and the group rarely, if ever, recruits new members.

8.

7 – High. This workgroup is likely to have a future together (one to two years), *and* has a working history together (one to two years). New members are added to the group occasionally, but for the most part, it is the same people all of the time.

6.

5 – Medium. This is a new workgroup that came together to work on a specific, long-term project (e.g., six months to one year) with a defined ending. There are no expectations that this group will work together again after the conclusion of this project. There is a main, core set of group members, but new members are sometimes added to do specific tasks.

4.

3 – Low. This is a new workgroup working on a specific, short-term project (six months or less) with a defined ending. There is no expectation that this team will work together again after this project has concluded. There are a few core group members, but most people were assigned to the workgroup as part of a temporary assignment.

2.

1 – Very Low. This is a short-term workgroup that is only going to meet one or two times for a short period (one week or less). People are almost total strangers to one another and do not spend enough time together to really get to know each other.

Team Viability (3-items)

All items were taken from the team viability measure reported in Marrone, et al. (2007) and use the instructions and scale anchors below:

Source: Marrone, J.A., Tesluk, P.E., & Carson, J.B. (2007). A multilevel investigation of antecedents and consequences of team member boundary-spanning behavior. *Academy of Management Journal*, 50, 1423-1439.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. Group members have found being a member of this workgroup to be a very satisfying experience.
2. Most group members feel like they are learning a great deal by working on this project.
3. Most of the members of this workgroup would welcome the opportunity to work as a group again in the future.

Team Performance (4-items)

All items were adapted from the task performance measure reported in Tsui, et al. (1997) and use the instructions and scale anchors below:

Source: Tsui, A.S., Pearce, J.L., Porter, L.W., & Tripoli, A.M. (1997). Alternative approaches to the employee-organization relationship: Does investment in employees pay off? *Academy of Management Journal*, 40, 1089-1121.

Scale Anchors:

1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*

Instructions:

Indicate the extent that you agree with each of the following statements below.

1. Overall, this workgroup performs well on their assigned tasks.
2. The quality of work in this workgroup is much higher than average.
3. Members of this workgroup strive for higher quality work than required.
4. Workgroup members perform their core job tasks well.

Personality – Five-Factor Model

All items for the five-factor model of personality were taken from International Personality Inventory Pool (IPIP) and use the instructions and scale anchors below:

Source: Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4, 26-42.

Instructions:

Indicate how accurately each statement below describes how you see yourself, NOT how you would like to be in the future or how you wish others to see you.

Scale Anchors: 1 = *very inaccurately*, 2 = *inaccurately*, 3 = *slightly inaccurately*, 4 = *neither accurate nor inaccurately*, 5 = *slightly accurately*, 6 = *accurately*, 7 = *very accurately*

Extraversion (5-items)

1. I feel comfortable around other people.
2. I can make friends easily.
3. I feel at ease around other people.
4. I am skilled at handling almost all social situations.
5. I frequently start conversations with others.

Agreeableness (5-items)

1. I sympathize with other people's feelings.
2. I take time out for others.
3. I am very good at making people feel at ease.
4. I know how to comfort others very well.
5. I am on good terms with nearly everyone I know.

Conscientiousness (5-items)

1. I am always prepared.
2. I pay close attention to details.
3. I always do things according to a plan.
4. I make plans and stick to them.
5. I love order and regularity.

Emotional Stability (5-items)

1. I am relaxed most of the time.
2. I seldomly feel blue.
3. I am not easily bothered by things.
4. I rarely get irritated.
5. I seldomly get mad.

Openness (5-items)

1. I have a vivid imagination.
2. I love to think up new ways of doing things.
3. I have a rich vocabulary.
4. I spend a lot of time reflecting on things.
5. I often have excellent ideas.

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