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Revisiting the mediating role of leader–member exchange in transformational leadership: the differential impact model

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Transformational leadership (TFL) has been proposed as an essential antecedent of leader–member exchange (LMX), which in turn affects outcomes in organizations. We extend this mediation hypothesis in two ways by proposing a differential impact model, which we test on three organizational outcomes: employee job satisfaction, employee organizational commitment, and leader effectiveness. First, we extend LMX's mediational impact—which has previously only been tested for employee outcomes—to leader effectiveness. Second, we argue that this mediation will be stronger for outcomes that are more proximal rather than distal to dyadic relations between leader and followers (high proximity: job satisfaction; medium proximity: organizational commitment; low proximity: leader effectiveness). Meta-analytic structural equation modelling based on 132 studies revealed that LMX mediates TFL's relationships with employee outcomes (more strongly for job satisfaction than for commitment), but not with leader effectiveness, whereas TFL showed a stronger direct link to leader effectiveness. The findings suggest that TFL and LMX contribute differentially to organizational outcomes depending on their proximity to dyadic relations between leaders and followers. The differential impact model uncovers leadership effectiveness processes, integrates influential leadership theories, and highlights the importance of distinguishing between different outcome measures and the processes facilitating them.

Keywords: transformational leadership; leader-member exchange; leader effectiveness; meta-analysis

How come transformational leaders have such a substantial impact on organizational outcomes? Understanding the processes by which transformational leaders influence their organizations is an important and fundamental inquiry in leadership research. Researchers have recently suggested that building positive interpersonal relations (leader–member exchange, LMX; Graen, Novak, & Sommerkamp, 1982) are an important way through which transformational leaders affect employees' organizational outcomes (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Shusha, 2013; Wang, Law, Hackett, Wang, & Chen, 2005). However, does this relational process underpinning TFL work for all outcomes or should the theoretical underpinnings be distinguished according to the outcomes' characteristics? Based on the current state of the literature, one might too hastily conclude that TFL is beneficial for all types of outcomes by building positive interpersonal relationships (i.e., LMX). In the current meta-analysis, we illustrate that the strength of the mediating role of LMX depends on the outcome's proximity to leader

relationships—that is, we argue for a differential mediation model.

More specifically, we contribute to the literature by providing answers to two important remaining questions concerning the mediation role of LMX in the relationship between TFL and organizational outcomes. First, previous studies were restricted to employee outcomes—that is, any work-related outcomes that capture employees' attitudes or behaviours (e.g., organizational citizenship behaviour, employee performance, and job satisfaction). The state of the art thus cannot answer the question whether LMX might also mediate between TFL and leader outcomes—which we conceptualize as work-related attitudes or behaviours shown by or attributed to leaders. Given that LMX deals with the quality of relationship between *leader* and *follower* one could argue that LMX should also play an important role in shaping TFL's influence on leader outcomes.

Second, it is unclear whether LMX facilitates TFL effects on various types of organizational outcomes to a similar extent. We will argue that it is unlikely that LMX plays a similar mediating role for all types of outcomes,

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given that for certain outcomes good leader–follower relationships are less important than for other outcomes. That is, we propose that some outcomes are more *proximal* to LMX than others, such that these outcomes better match high-quality LMX relationships (see Ullrich, Wieseke, Christ, Schulze, & van Dick, 2007). We define proximity as the extent to which an outcome variable—such as job satisfaction—is directly influenced by the dyadic relationship between leader and follower. This definition of proximity builds on theories pertaining to target similarity (Lavelle, Rupp, & Brockner, 2007) and correspondence of focus (e.g., van Dick, Wagner, Stellmacher, & Christ, 2004), which claim that constructs more strongly influence each other if they correspond in terms of focus or target.

In the present study, we zoom in on three different outcomes which we argue differ in proximity to the dyadic relationship between leader and employees, but that all are clearly associated with transformational leadership and LMX: employee job satisfaction, employee organizational commitment, and leader effectiveness. These three constructs are essential for organizational success and their importance is evident from their widespread representation in empirical research, which is an important criterion for their inclusion in a meta-analysis (Hedges & Olkin, 1985; Hogan, Curphy, & Hogan, 1994; Lipsey & Wilson, 2001). We define employee job satisfaction as employees' affective evaluation of a task, job, or project (e.g., Cranny, Smith, & Stone, 1992; Locke, 1969). Organizational commitment is the strength of emotional attachment to, identification with, and a person's involvement in an organization (e.g., Meyer & Allen, 1997; Porter, Steers, Mowday, & Boulian, 1974). Leader effectiveness focuses on the leader and is defined as the rating of leaders' abilities, skills, and achievement in a defined task (e.g., Fleishman, 1982; Fleishman & Quaintance, 1984).

We argue that the LMX mediation applies particularly to outcomes for which leader–follower relationships are more important. In this respect, we propose that the two employee outcomes (i.e., job satisfaction and organizational commitment) rely more on relationships than the leader outcome, which should be more strongly affected by leaders' behaviours; that is, by TFL. Moreover, we further qualify this differential mediation model by proposing that LMX will more strongly mediate TFL effects on employee job satisfaction than on organizational commitment, given that the former is more proximal to the leader than the latter. We thus propose a *differential impact model* of TFL and LMX which states that the relative contribution of TFL and LMX to the outcome measure depends on the type of outcome. To test this model, we employ state-of-the-art meta-analytical methods, which combine a greater set of studies and test the *extent* to which these mediational effects apply to outcomes that differ in their proximity to the relationship between leaders and followers.

We aim to contribute to the literature in a number of ways. First, the current study is the first meta-analysis with the primary aim to test LMX's mediating role in the relationship between TFL and employee outcomes (i.e., job satisfaction and organizational commitment) as well as leader outcomes (i.e., leader performance). As such, we extend previous meta-analytical studies pertaining to TFL and LMX and a variety of outcomes. With regards to TFL and outcomes, even though a number of meta-analyses have assessed the associations between TFL and job satisfaction (DeGroot, Kiker, & Cross, 2000; Dum Dum, Lowe, & Avolio, 2002), organizational commitment (DeGroot et al., 2000), and performance, operationalized as employee, team and organizational performance as well as leader effectiveness (e.g., DeGroot et al., 2000; Dum Dum et al., 2002; Fuller, Patterson, Hester, & Stringer, 1996; Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996; Wang, Oh, Courtright, & Colbert, 2011), these previous studies did not focus on the mediating role of LMX in this relationship. Regarding LMX, of the three meta-analyses on LMX's relationships (Dulebohn et al., 2012; Gerstner & Day, 1997; Ilies, Nahrgang, & Morgeson, 2007), two report on the associations between LMX and job satisfaction (Dulebohn et al., 2012; Gerstner & Day, 1997), organizational commitment (Dulebohn et al., 2012; Gerstner & Day, 1997), and employee job performance (Dulebohn et al., 2012; Gerstner & Day, 1997), but to the best of our knowledge, these meta-analyses remain silent with regards to LMX's link to leader effectiveness. This might be explained by the low number of primary studies focusing on the link between LMX and leader effectiveness (5 studies, see Table 3). However, we believe that the available studies provide sufficient data for the first meta-analytical assessment of our differential impact model. To compare relevant previous meta-analytic results with our current meta-analysis, we have included previous meta-analytical findings in Table 3.

Second, we contribute to the literature by explicitly proposing and testing a differential mediation model, in which the proximity of the outcome variable to dyadic leader–follower relations is argued to determine the strength of the mediational effect of LMX. In this respect, it is important to acknowledge that a previous meta-analysis by Dulebohn and colleagues (2012), which included 21 antecedents and 16 consequences of LMX, included an exploratory test of the mediating role of LMX in the associations of transformational leadership with job and supervisor satisfaction. We extend Dulebohn et al.'s findings (2012) by testing confirmatory hypotheses pertaining to the mediating role of LMX in the relationship between TFL and outcomes depending on the proximity of the outcome variable to the concept of LMX. Finally, as a third contribution, we test our hypotheses by utilizing a recent advancement in meta-analytical structural equation

modelling (MASEM, Cheung & Chan, 2005) and SEM assessments of mediation effects (see James, Mulaik, & Brett, 2006).

Transformational leadership theory

Researchers agree that TFL is a particularly effective form of leadership (Bass, 1999; Burns, 1978; Dumdum et al., 2002; Hobman, Jackson, Jimmieson, & Martin, 2011; Judge & Piccolo, 2004). Transformational leadership has been construed as a multifaceted construct comprising the behaviours *individualized influence*, *intellectual stimulation*, *idealized influence*, and *inspirational motivation* (Avolio, Bass, & Jung, 1997; Bass, 1985). These multiple facets have often been summarized in an overall TFL score in previous research (DeRue, Nahrgang, Wellman, & Humphrey, 2011; Epitropaki & Martin, 2013; Nijstad, Berger-Selman, & De Dreu, 2012), due to the high inter-correlation between the sub-dimensions. Nevertheless, scholars have more recently suggested investigating these sub-dimensions' individual or joint contributions (Deinert, Homan, Boer, Voelpel, & Gutermann, 2015; Rafferty & Griffin, 2004; van Knippenberg & Sitkin, 2013), or differentiating between individual-focused and group-focused aspects of TFL (Kark & Shamir, 2002; Kunze, de Jong, & Bruch, 2013; Wang & Howell, 2010; Wu, Tsui, & Kinicki, 2010). Even though we acknowledge the potential benefits of these different distinctions,¹ our meta-analysis focuses on TFL as an overarching construct, because only a few studies included in our meta-analysis consistently report their findings on the sub-dimensions.

As highlighted in various studies and meta-analyses, TFL is positively associated with outcomes such as employee job satisfaction (DeGroot et al., 2000; Dumdum et al., 2002; Judge & Piccolo, 2004; Lowe et al., 1996), organizational commitment (DeGroot et al., 2000; Rai & Sinha, 2000), and leader performance or effectiveness (Cavazotte, Moreno, & Hickmann, 2012; DeGroot et al., 2000; Judge & Piccolo, 2004). The LMX mediational model suggests that high-quality leader relationships facilitate these outcome effects (Shusha, 2013; Wang et al., 2005).

LMX and the TFL–outcome relationship

The LMX theory of leadership focuses on the one-to-one relationships between followers and leaders (Cogliser & Schriesheim, 2000; Schyns, Maslyn, & Weibler, 2010). More specifically, leaders develop different quality relationships with different subordinates, which can range from low- to high-quality LMX (Graen, 1976). Leaders' exercise of formal authority, which translates into routine follower performance and a feeling of unfairness among followers, defines low-quality LMX relationships (Bass,

1990). In return, their followers receive ordinary and standard organizational benefits (Graen, 1976; Yukl, 2010). In contrast, mutual trust, support (Liden & Graen, 1980), interpersonal attraction (Dansereau, Graen, & Haga, 1975), obligations (Graen & Uhl-Bien, 1995), and conscientious followers characterize high-quality LMX relationships (Liden & Graen, 1980). Followers receive beneficial rewards in the form of promotion or satisfying positions (Graen & Uhl-Bien, 1995) if they perform favourably.

Transformational leaders are especially competent at creating positive relationships with their followers (Bass & Avolio, 1994; Deluga, 1992; Wang et al., 2005). Transformational leaders demonstrate high ethical and moral standards, consider individual needs and feelings, and do not criticize their followers in public (Avolio & Bass, 2004; Bass, 1985; Bass & Riggio, 2006; Kearney & Gebert, 2009; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). As a result of these individual and collective behaviours, followers are likely to feel appreciated and safe, which will in turn result in positive relationships between the followers and their leaders. In line with relational leadership theory, we argue that these relationships influence how the followers experience their work and relate to their organization (Brower, Schoorman, & Tan, 2000; Uhl-Bien, 2006). If the quality of the relationships between followers and leaders is high, this results in the followers' high job satisfaction (and vice versa), because the leader is the direct facilitator and creator of job characteristics, and can communicate tasks, requirements, and changes in the job with ease if the relationship quality is high, trust-worthy, and caring.

Furthermore, high-quality relationships between followers and leaders might also promote followers' commitment to the organization (e.g., Loi, Mao, & Ngo, 2009). If followers have positive experiences at work, they are likely to cooperate and reciprocate positive behaviours in order to make a positive contribution to the work context (Bernerth, Armenakis, Feild, Giles, & Walker, 2007; Podsakoff et al., 1990), which will become visible in their high organizational commitment. This argument may particularly apply to organizational commitment's affective components rather than to the continuance or normative aspects (Allen & Meyer, 1990; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Employees' affective organizational commitment is characterized by their emotional attachment, identification with, and involvement in the organization. Previous meta-analyses found that this aspect of commitment was most strongly associated with LMX (Dulebohn et al., 2012) and with TFL (Meyer et al., 2002). Hence, it is valid to suggest that affective attachment to the organization is likely to be built on the direct relations with the organization's representatives with whom employees work closest; that is, their direct supervisor.

Finally, LMX relationships are mutual, as leaders and followers invest in them. Transformational leaders invest strongly in relationships with their followers by, for instance, caring about them, coaching them when needed, and providing a vision (Bass & Riggio, 2006; Maslyn & Uhl-Bien, 2001). If transformational leaders experience high-quality relationships with their followers, their work outcomes are also likely to benefit from these relationships. Followers reciprocate trust and caring behaviours in high-quality LMX relations, leading to work environments and conditions that enable leaders, who strive for transformational goals, to be highly effective (e.g., Bauer, Erdogan, Liden, & Wayne, 2006; Klein & Kim, 1998; Naidoo, Kohari, Lord, & DuBois, 2010). Moreover, it has been argued that LMX indicates leaders' role adjustment, which supports their job performance (Bauer et al., 2006). In sum, due to the reciprocity and mutuality of relationship investment and benefits, high-quality LMX is likely to also affect leaders' motivation and general work attitudes and behaviours, such as their effectiveness and performance, positively (Cogliser, Schriesheim, Scandura, & Gardner, 2009). Hence, based on these previous arguments and findings, we propose that it is feasible to extend the LMX mediational model beyond employee outcomes to leader effectiveness.

Hypothesis 1: LMX mediates the relationships between TFL and employees' job satisfaction (H1a), employees' organizational commitment (H1b), and leaders' effectiveness (H1c).

However, we qualify this hypothesis by proposing that the relative contribution of TFL and the indirect effect of TFL via LMX differs between the different leaders and followers outcomes.

Disentangling the relative contributions of leader behaviour and relationships: the differential impact model

The impact that leaders' relations and behaviours may have on different outcomes may vary in strength. We differentiate between the outcomes' levels of proximity to the relationship between employees and leaders; that is, between more proximal and distal outcomes. More specifically, we propose the *differential impact model* of TFL and LMX, in which LMX will play a more important role for outcome variables that are more proximal rather than distal to the leader–follower relationship's quality. More specifically, we argue that the strength of TFL's indirect effect via LMX will increase for outcomes that are more clearly attributed to the leader relations than to others and/or the context.

Links should be strongest when the focus or level of an antecedent and an outcome correspond more directly (Lavelle et al., 2007; van Dick et al., 2004). In this respect,

van Dick and colleagues (2004) largely supported this correspondence of focus principle by showing the strength of the associations between an antecedent and an outcome depends on the level of fit or correspondence. For instance, they found that team climate was most strongly associated with team identification. Similarly, Lavelle and colleagues (2007) proposed that organizational variables, whose targets are more similar (e.g., citizenship behaviour towards the organization is closely matched by commitment to the organization; Lavelle et al., 2009) are more strongly correlated than dissimilar variables. We extend this target similarity effect and the correspondence of focus idea by arguing these will generalize to the association between leadership processes and different outcome variables. More specifically, we argue that when a leadership behaviour specifically facilitates the psychological processes underpinning an outcome variable, the impact of the behaviour on that outcome will be larger than on other outcomes, which match these psychological processes and influences to a lesser degree. In this respect, we propose that the outcome's proximity to the leader should shape the strength of an outcome's association with follower–leader relationships. We argue that certain outcome variables are more likely to be affected by leader–follower relationships than others, because their psychological underpinning relate more strongly to LMX quality. In contrast, other outcome variables are more likely to be affected by a broader variety of influences, that is, are lower in proximity to leader–follower relationships.

Job satisfaction can be characterized as followers' evaluation and direct experience with their job. Their immediate leaders clearly influence these follower evaluations and experiences (Dulebohn et al., 2012; Ferris et al., 2009; Uhl-Bien & Maslyn, 2003). More specifically, relational leadership researchers state that the quality of the relationships between leaders and followers (i.e., LMX) is critical for the way followers experience their work (Brower et al., 2000). Hence, job satisfaction is an example of a proximal outcome in terms of leader–follower relations, and TFL should have a strong indirect effect on job satisfaction via LMX.

Organizational commitment is created by leaders as representatives of the organizations which makes leaders' behaviours towards and relations with their followers a more abstract vehicle for promoting affective responses to the organization as a whole (Reichers, 1985; Settoon, Bennett, & Liden, 1996). Identification and internalization processes that transformational leaders activate, as well as the vision they provide, are likely to contribute equally to organizational commitment as positive relationships between followers and leaders. High LMX might promote followers' affective commitment to the entire organization, but TFL behaviours will also be more directly related to organizational commitment through the development of an overarching vision and the promoting of organizational goals.

Therefore, organizational commitment is a more distal employee outcome than job satisfaction, which should result in a somewhat weaker indirect effect of TFL via LMX and a stronger direct TFL effect (Baron & Kenny, 1986).

Finally, leaders' outcomes—such as their effectiveness—depend on a variety of influences (Zaccaro & Klimoski, 2002): relations with upper-level management, with other leaders at an equivalent level, with their direct subordinates, balancing decision autonomy and decision pressure, market developments, among others. Leaders' behaviours balance many of these tasks and challenges, while leader-follower relationships are an important contribution among a number of other contributors to leaders' effectiveness. Leadership behaviours are thus among the foremost influences on effectiveness. This suggests that LMX's mediational role will be somewhat less strong in respect of leaders' effectiveness than with regard to employee outcomes. We therefore predict that TFL makes a stronger direct contribution to leader effectiveness than to employee job satisfaction and organizational commitment, whereas the indirect effect of TFL via LMX will be stronger in respect of employee job satisfaction and organizational commitment than with regard to leaders' effectiveness. The direct and indirect effects in a mediation model can be interrelated in the sense that the direct effect decreases when the indirect effect is stronger (cf. Baron & Kenny, 1986). However, although indirect effects may be absent or present, the direct effects may vary regardless of the mediator; hence, Hypothesis 2 entails two parts referring to the indirect and direct effects.

Hypothesis 2: The relative strength of the mediating role of LMX in the relationship between TFL and outcomes is strongest for employee job satisfaction, followed by organizational commitment, and weakest for leader effectiveness (H2a), whereas the direct effect of TFL is strongest for leader effectiveness, followed by employee organizational commitment and weakest for job satisfaction (H2b).

Method

Identification and selection of studies

Three different approaches were used to identify relevant articles for inclusion in the meta-analysis. First, we searched for studies between 1990 and 2014 in computerized databases (a multi-source search), using the key word *leader*, *LMX*, and *transformational*. Within electronic databases (Academic Search Premier, EBSCO, EconLit, and PsycINFO), we looked for relevant papers in nine leading journals in the field of leadership, management, and organizational behaviour (*Academy of Management Journal*, *Administrative Science Quarterly*, *British Journal of Management*, *European*

Journal of Work and Organizational Psychology, *Journal of Applied Psychology*, *Journal of Organizational Behavior*, *Leadership Quarterly*, *Organization Science*, and *Organizational Behavior and Human Decision Processes*). Second, the second author submitted a request for additional relevant or unpublished material to the *Academy of Management's* "Organizational Behavior Division Listserv." Finally, we contacted authors who had recently published in the area of TFL and LMX. This search produced 1035 studies. We excluded theoretical and review articles. We included studies in which the relationships between at least two of the variables were investigated and in which sufficient statistical data (correlations based on independent samples; correlations coded as effect sizes) were reported. Some articles included different samples, for example, from different organizations or countries (e.g., Schyns, Paul, Mohr, & Blank, 2005). In these cases, the samples were treated as separate studies.

In total, we used 132(*k*) independent studies reported in 116 articles (see the supplementary material for the references of the included studies). The aggregated sample sizes of the study variables' effect sizes varied from 475 to 14,102, which produced a total *N* of 70,529. We decided to limit the search period for the journals specified above to the years 1990–2014 and to use nine leading journals in the field, because this process produced a sufficiently large number of samples reported in high-quality peer-reviewed journals. This strategy of using relatively narrow inclusion criteria in terms of journal selection provided effect sizes based on an extensive sample, while also controlling for quality standards. Moreover, there is no theoretical argument that including other journals, or earlier time periods, would result in different correlations or relationships being identified (Van der Linden, Te Nijenhuis, & Bakker, 2010). On the contrary, the file-drawer problem seems more problematic for meta-analyses; hence, we sought strategies to include unpublished studies (see above).

Our meta-analysis included the following correlations as effect sizes: between TFL and the three outcomes (job satisfaction, organizational commitment, and leader effectiveness), between LMX and the three outcomes, between TFL and LMX, and the intercorrelations between the three outcomes. The coded measures and raters are described in Table 1. The Multifactor Leadership Questionnaire (Avolio et al., 1997) is the most commonly used TFL measure. We are only interested in the overall TFL correlation. As TFL can also be conceptualized according to its sub-dimensions (e.g. charisma, intellectual stimulation), we averaged the correlations of the sub-dimensions if a study did not report the correlations with the overall TFL measure. For instance, to calculate the correlation between overall TFL and organizational commitment for the study by Barling, Weber, and Kelloway (1996; pretest data), we averaged the correlations of the sub-dimensions charisma, intellectual stimulation, and individualized consideration with organizational commitment. Furthermore, the one-dimensional LMX conceptualization was usually used to assess the LMX quality (see Table 1).

Table 1. Overview of coded measures ($k = 132$).

Variable	Measures
Leadership ratings	90.5% by followers 4.8% by leaders 4.8% by leaders' supervisors
Transformational leadership	74.6% Multifactor Leadership Questionnaire 25.4% others
Leader-member exchange	88.3% one-dimensional scales (Graen & Schiemann, 1978; Scandura & Schriesheim, 1994) 11.7% multidimensional measure (LMX-MDM; Liden & Maslyn, 1998)
Job satisfaction	100% used standard measures (e.g., Spector, 1997)
Organizational commitment	73.6% affective commitment 24.5% overall organizational commitment
Leader effectiveness	43.8% by followers 25.0% by superiors 9.4% by self-rating 9.4% by objective measures 9.4% by qualitative measures

Our analysis included studies in which followers' job satisfaction and organizational commitment had been assessed, as well as the leader effectiveness. Subordinates had rated the job satisfaction and organizational commitment, while subordinates or supervisors had mostly rated the leader effectiveness (see below). Employees' job satisfaction was measured, for instance, by items such as "Generally speaking, I am very satisfied with this job" (Spector, 1997; see also Warr, Cook, & Wall, 1979). The majority of studies measured affective commitment by, for instance, using Meyer and Allen's (1997) scale. Followers or their superiors had mostly rated leader effectiveness, while fewer studies used self-ratings, objective, or qualitative measures such as video analysis coded for leadership effectiveness. Typical quantitative measures were, for instance, the in-role behaviour scale by Williams and Anderson (1991), or items reflecting leader effectiveness or performance, such as "Compared to others, how would you rate your supervisor's overall performance?" (Naidoo et al., 2010).

The second author, with the help of research assistants, coded most of the studies and resolved any ambiguities in coding via discussions with her co-authors. Additionally, an independent, trained rater coded 18% of the studies. The inter-rater agreement was high (84%, *Spearman* $r = 0.967$, $kappa = 0.872$).

Meta-analysis: meta-analytic structural equation modelling technique

We applied a SEM approach, utilizing a recent advancement in meta-analytical structural equation modelling

(MASEM, Cheung, 2008, 2010; Cheung & Chan, 2005, 2009; Viswesvaran & Ones, 1995) and SEM assessments of mediation effects (see James et al., 2006). MASEM enables the estimation of the true population correlations of the relationships between TFL, LMX, and the outcome variables, as well as the assessment of the mediational model, while simultaneously taking into account the covariations between the outcomes in our structural equation model. Utilizing meta-analyses to answer our research questions has the advantage of strong statistical power, a test of homogeneity in the effects, and the possibility of assessing moderators relating to method, situational, and sample characteristics (Aguinis, Pierce, Bosco, Dalton, & Dalton, 2011). Furthermore, in line with recent concerns regarding null hypothesis significance testing (NHST, Cumming, 2014), we focus our analyses whenever possible on effect sizes and confidence intervals.

We followed a two-step procedure and additionally tested the robustness of our results. In a first step, we meta-analyzed the associations of the five included variables, using sample size-weighted correlations as effect sizes, which were calculated by random effect models (Lipsey & Wilson, 2001). These correlations were combined into a pooled correlation matrix. In the next step, we applied structural equation modelling to the obtained pooled correlation matrix in Mplus6 (Muthén & Muthén, 2010). The three mediation hypotheses were construed as indirect effects in order to test TFL's indirect effect via LMX on the three outcome measures (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2008). Additionally, in order to evaluate the relative contribution of (a) LMX as a mediator of the three different outcomes, we assessed the overlapping of the indirect effects' confidence intervals, and of (b) TFL's effect vis-à-vis LMX's effect on the three outcomes, we tested the individual strengths of the path coefficients, using the Wald Chi-square test (Muthén & Muthén, 2010; Wald, 1943). To conduct the MASEM analyses in the second step, we used the harmonic mean of the sample size as recommended by Landis (2013; $N_h = 2459$).

We conducted a number of additional analyses aimed at establishing an indication of our findings' robustness. We (a) assessed the homogeneity of the effects, (b) tested a number of moderator influences based on method, situational, and sample factors, and (c) tested the applicability of an alternative theoretical model (i.e., TFL as a mediator).

Results

Characteristics of the studies

Before considering the effect sizes of the relationships between the leadership behaviours and the outcome variables, we analyzed the characteristics of the studies (see

Table 2). Most of the research was conducted in the USA and used cross-sectional survey methods at the individual level of analysis. The data comprised a larger percentage

of male than female leaders and an almost equal number of male and female followers. The participants' response rate—if reported ($n_{\text{leader/follower}} = 36/53$)—was high.

Table 2. Summary of study characteristics.

Variable	Value	SD	Range
Median year publication	2006.5	5.69	1990–2014
Mean leader age (years)	41.35	5.37	27.70–53.05
Mean follower age (years)	35.59	6.73	19.00–46.60
Mean leader male (%)	64.06	23.52	6–100
Mean follower male (%)	50.41	22.14	3–100
Mean response rate leader (%)	64.18	24.57	12.62–100
Mean response rate follower (%)	62.00	21.16	16.70–99
Country			
United States (<i>k</i>)	78		
China (<i>k</i>)	11		
Germany (<i>k</i>)	7		
Netherlands (<i>k</i>)	5		
Other ^a (<i>k</i>)	32		
Design			
Cross-sectional (<i>k</i>)	114		
Longitudinal (<i>k</i>)	18		
Type of study			
Survey (<i>k</i>)	117		
Others (<i>k</i>)	15		
Level			
Individual (<i>k</i>)	123		
Group (<i>k</i>)	9		

Note: ^a Other countries include: Australia, Belgium, Canada, Hungary, Japan, Malaysia, Mexico, Norway, Portugal, Russia, Singapore, South Korea, South Pacific Island, Switzerland, Taiwan, Thailand, Turkey, UK, Ukraine, and international samples.

First, we calculated the effect sizes of the variable associations and reported the number of studies (*k*), the sample sizes (*N*), the sample-size weighted correlation (*r*), the 95% confidence interval, and the weighted correlations corrected for moderator effects (*r_c*; for the calculation details see below) of each association as presented in Table 3. We found a positive correlation between TFL and job satisfaction ($r = .44$), organizational commitment ($r = .41$), and leader effectiveness ($r = .41$), as well as between LMX and job satisfaction ($r = .47$), organizational commitment ($r = .40$), and leader effectiveness ($r = .30$). Furthermore, a positive correlation was obtained between TFL and LMX ($r = 0.70$). The confidence intervals indicate the consistency and the stability of these effects.

Hypothesis tests

In order to test the hypothesis that TFL has an indirect effect via LMX on job satisfaction (H1a), organizational commitment (H1b), and leader effectiveness (H1c), we evaluated the confidence intervals of the indirect effects. We calculated each indirect effect separately within the overall model, including all the direct links between TFL and outcomes (see Figure 1 for the overall model).

Table 3. Meta-analytic review of relationships between the study variables.

	Present meta-analysis					Previous meta-analyses on LMX and TFL				
	<i>k</i>	<i>N</i>	<i>r</i>	95%CI	<i>r_c</i>	Source	<i>k</i>	<i>N</i>	<i>r</i>	ρ
LMX <-> LE	5	475	.30	[.03, .57]	.30	None available				
LMX <-> JS	36	8521	.47	[.42, .52]	.47	Dulebohn et al., 2012	88	22520	.42	.47
						Gerstner & Day, 1997 ^a	33	6887	.46	.50
LMX <-> OC	33	7489	.40	[.36, .44]	.40	Dulebohn et al., 2012	58	14208	.41	.47
						Gerstner & Day, 1997	17	3006	.35	.42
TFL <-> LE	29	9085	.41	[.31, .51]	.41	DeGroot et al., 2000 ^b	23	5577	.68	.74
						Dumdum et al., 2002 ^b	18	7262	.43	.50
						Fuller et al., 1996 ^b	10	1524	.68	.78
						Judge & Piccolo, 2004 ^b	27	5415	–	.64
						Lowe et al., 1996 ^b	47	6485	.62	.71
TFL <-> JS	30	14138	.44	[.36, .52]	.44	DeGroot et al., 2000 ^b	14	3832	.70	.77
						Dumdum et al., 2002 ^b	6	2175	.27	.30
						Judge & Piccolo, 2004 ^b	18	5279	–	.58
TFL <-> OC	32	10426	.41	[.36, .45]	.40	DeGroot et al., 2000	3	2040	.39	.43
LMX <-> TFL	7	1450	.70	[.64, .75]	.70	Dulebohn et al., 2012	20	5451	.66	.73
LE <-> JS	8	5834	.42	[.26, .58]	.44	–				
LE <-> OC	3	2074	.24	[.10, .38]	.27	–				
JS <-> OC	26	11037	.56	[.48, .63]	.56	–				

Note: LMX = leader–member exchange; LE = leader effectiveness; JS = job satisfaction; OC = organizational commitment; TFL = transformational leadership; *k* = number of studies; *N* = combined sample size; *r* = sample size weighted correlation; 95% CI = 95% confidence interval; *r_c* = sample size weighted correlation corrected for control variables (see Table 4); ρ = estimated corrected mean effect size (according to Hunter & Schmidt, 2004).

^a Overall satisfaction—incl. job satisfaction—was assessed.

^b Effect sizes taken from Wang et al.'s (2011) summary.

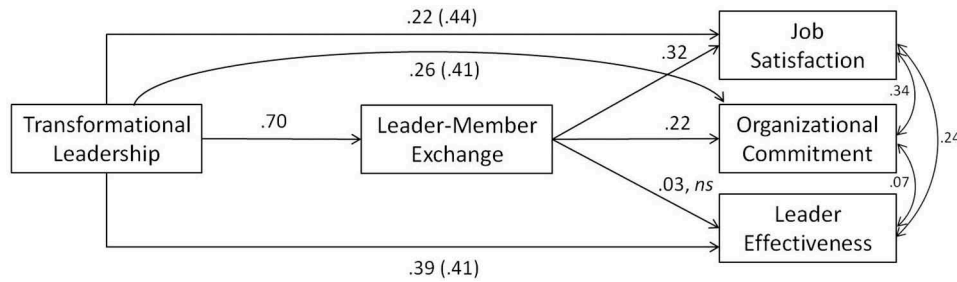


Figure 1. LMX as mediator of TFL–outcome relations (hypothesized model).

Note: All path coefficients are statistically significant at $p < .001$ unless noted otherwise. In parentheses we present path coefficients for the direct effects of TFL before the mediator was entered.

The indirect effects analysis showed that the indirect effect of TFL on job satisfaction via LMX was significant (indirect effect = .22, 95% CI: [.19, .26]). Furthermore, we obtained a significant indirect effect for organizational commitment (indirect effect = .16, 95% CI: [.12, .19]). However, with regard to leader effectiveness we did not obtain the hypothesized indirect effect (indirect effect = .02, 95% CI: [−.02, .05]) due to a non-significant association between LMX and leader effectiveness ($\beta = .03$, $p = .32$) when taking the direct TFL effect into account ($\beta = .39$, $p < .001$). Therefore, Hypothesis 1a and 1b were supported, whereas Hypothesis 1c was rejected. These results point to the applicability of our relativity argument with regard to LMX's differential contribution when explaining TFL–outcome associations. Here, the relationship quality only seems to facilitate the employee outcomes, whereas leader effectiveness was directly associated with leaders' transformational leadership style.

In order to test the hypothesis on LMX's relative contribution as a mediator of TFL–outcome associations (Hypothesis 2a), we assessed the overlapping of the indirect effect confidence intervals. The differences in the strength of the indirect effects via LMX would be confirmed if the confidence intervals of the indirect effects for the different outcome variables do not overlap. In our analysis, the three 95% confidence intervals between the employee outcomes and leader effectiveness show no overlap (job satisfaction [.19, .26] > effectiveness [−.02, .05]; job satisfaction [.19, .26] > organizational commitment [.12, .19]; organizational commitment [.12, .19] > effectiveness [−.02, .05]), indicating that TFL has stronger indirect effects via LMX for more proximal than more distal outcomes. These results provide support for Hypothesis 2a.

To test Hypotheses 2b, we compared the strengths of the associations between TFL and the three outcome measures by conducting Wald χ^2 tests (Muthén & Muthén, 2010; Wald, 1943). The direct effect of TFL on leader effectiveness was significantly stronger than the influence of TFL on both employee outcomes organizational commitment ($\chi^2 = 15.75$, $df = 1$, $p < .001$) and job satisfaction

($\chi^2 = 34.25$, $df = 1$, $p < .001$). TFL's direct effect on the more distal employee outcome organizational commitment was however not significantly stronger than TFL's influence on the proximal employee outcome job satisfaction ($\chi^2 = 1.99$, $df = 1$, $p = .16$). Thus, Hypothesis 2b is supported for the most part.

To further explore the differential impact model, we compared the paths of TFL versus LMX on the three outcomes: the relative contribution of TFL ($\beta = .22$) on job satisfaction is significantly lower than the effect of LMX ($\beta = .32$; $\chi^2 = 4.92$, $df = 1$, $p < .05$). Furthermore, the relative contribution of TFL ($\beta = .26$) to organizational commitment is similar to the effect of LMX ($\beta = .22$; $\chi^2 = 0.50$, $df = 1$, $p = .48$). In addition, the relative contribution of TFL ($\beta = .39$) to leader effectiveness is significantly higher than the influence of LMX ($\beta = .03$; $\chi^2 = 59.56$, $df = 1$, $p < .001$). In sum, the meta-analytical data supported our differential impact predictions based on proximity in outcomes.

Robustness of results

We tested the homogeneity of effect sizes, using the Q-test statistic to examine whether each effect size was consistent across the studies (see Hedges & Olkin, 1985). Homogeneity tests revealed significant variations in all the associations, with the exception of the correlation between LMX and TFL (see Table 4). Evidence of heterogeneity in effect sizes can point to the presence of moderators, which were subsequently assessed. We assessed the influence of method, situational, and demographic factors. In respect of categorical moderators (e.g., study design), we conducted a meta-analytical analysis of variance, and, with regard to continuous moderators (e.g., percentage of male participants), we conducted meta-analytical regression analyses (Lipsey & Wilson, 2001).

As method factors, we assessed whether the usage of different leadership measures (TFL: MLQ = 1 vs. others = 0; LMX: LMX uni-dimensional = 1 vs. LMX-Multidimensional Model = 0), the reliability of leadership measures (Cronbach's alpha), and study design

Table 4. Heterogeneity tests and moderator analyses.

	Sources of heterogeneity: Moderator analysis											
	Heterogeneity			Method factors			Situational factors			Sample characteristics		
	LMX/TFL	Reliability leadership LMX/TFL	Design	Business context	Cultural context	Mean age leader/follower	Percentage male leader/follower	Q	Q(1)	β	Q(1)	β
LMX <-> LE	0.03	-0.03	1.66	-	-	-	-	32.94***	-	-	-	-
LMX <-> JS	0.54	-0.24	2.51	0.05	7.72**	.12/-06	-	173.13***	0.05	.12/-06	-	-
LMX <-> OC	0.22	.17	2.48	0.00	1.22	.01/-04	-	94.39***	0.00	.01/-04	-	-
TFL <-> LE	60.55***	.28	179.57***	33.92***	2.32	-.32/-03	-	601.91***	33.92***	-.32/-03	-	-
TFL <-> JS	24.06***	-0.02	68.89***	0.00	82.14***	-.50*/-.61**	-	614.40***	0.00	-.50*/-.61**	-	-
TFL <-> OC	1.22	.03	17.86***	1.71	39.19***	-.17/-25	-	148.86***	1.71	-.17/-25	-	-
LMX <-> TFL	2.33/0.62	.23/-10	.48	-	.36	-.51/-23	-	6.99	-	-.51/-23	-	-
LE <-> JS	na	na	65.36***	-	178.86***	-.76**/-53	-	245.29***	-	-.76**/-53	-	-
LE <-> OC	na	na	12.84***	-	12.90***	-	-	13.63***	-	-	-	-
JS <-> OC	na	na	20.98***	9.00**	47.08***	-.16/-05	-	356.85***	9.00**	-.16/-05	-	-

Note: LMX = leader-member exchange; TFL = transformational leadership; LE = leader effectiveness; JS = job satisfaction; OC = organizational commitment. Leadership measure: For TFL: MLQ (Avolio et al., 1997) = 1, others = 0; For LMX: one-dimensional LMX scales (Graen & Schemmann, 1978; Scandura & Schriesheim, 1994) = 1, multidimensional LMX scale (Liden & Maslyn, 1998) = 0; Design: cross-sectional = 1, longitudinal = 0; Business context: business = 1, students = 0; Cultural context: USA = 1, other = 0; * p < 0.05, ** p < 0.01, *** p < 0.001.

(cross-sectional = 1 vs. longitudinal = 0) affected the effect sizes.² As situational factors we assessed the study context (business = 1 vs. student samples = 0) and the cultural context (USA–American = 1 vs. others = 0).³ As sample demographic factors, we tested whether the sample mean age of leaders and followers and their gender distribution (percentage of male participants) influenced the magnitude of the effect sizes.⁴ In sum, we found a number of significant moderator effects affecting the effects sizes, whereas only one method moderator seemed to show a systematic influence on the effects: Longitudinal studies reported lower correlations across a number of associations than cross-sectional studies.

Next, we assessed the robustness of our hypotheses tests by controlling for significant moderators. To do so, we computed the corrected effect sizes by taking those moderator effects that showed significant effects into account (see Table 4). In order to retain the maximum number of studies, we imputed missing values of age, gender, and reliability by the mean values. There were no missing values for the other moderator variables. The corrected effect sizes changed only marginally compared to the raw effects ($\Delta r \leq .03$; see Table 3); furthermore, the corrected effects sizes correlated .995 with the raw effects sizes, indicating robustness of our results, which the moderating variables do not seem to systematically distort. Finally, the indirect effects' results remained virtually unchanged (job satisfaction: indirect effect = .22, 95% CI: [.19, .26]; commitment: indirect effect = .17, 95% CI: [.13, .20]; leader effectiveness: indirect effect = .02, 95% CI: [−.02, .05]).

Alternative model

Lastly, we tested an alternative theoretical model, proposing a reversed mediation process with TFL mediating the association between LMX and outcomes. Again, we assessed each indirect effect separately in the overall model containing all the direct links (see Figure 2). LMX showed indirect effects via TFL on all three associations: satisfaction (indirect effect = .15, 95% CI: [.12,

.19]), organizational commitment (indirect effect = .18, 95% CI: [.14, .21]), and leader effectiveness (indirect effect = .27, 95% CI: [.24, .31]).

Interestingly, when comparing the confidence intervals, TFL's relative contribution as a mediator vis-à-vis LMX as a mediator became evident: LMX showed its strongest indirect effect via TFL on leader effectiveness, which is significantly stronger than (a) the indirect effects on job satisfaction and commitment, and (b) the indirect effect of TFL via LMX on effectiveness (which was non-significant). The indirect effect of LMX via TFL on job satisfaction was significantly lower than the indirect effect of TFL via LMX. For organizational commitment, both mediators showed similar indirect effects. The assessment of this alternative theoretical model offers interesting insights into the underlying mechanisms of leadership–outcome relations for a diverse set of outcome measures. The implications of these findings for our theoretical arguments will be discussed later in detail.

Discussion

Previous studies showed that TFL affects employee outcomes, like job satisfaction and organizational commitment, indirectly via LMX (e.g., Dulebohn et al., 2012; Shusha, 2013; Wang et al., 2005). Our findings extend these previous conclusions by showing that LMX acts as a mediator in the TFL–employee outcomes relationships, but that this mediation role depends on the proximity of the employee outcomes. Moreover, based on previous theorizing, we argued that this mediation link could be extended to leader outcomes; however, the meta-analytical data failed to support this prediction. However, in support of our differential impact model, we showed that TFL prevails in its impact on leader outcomes over and above LMX. Moreover, the data suggest that TFL plays a mediational role in the LMX–leader outcome association, an intriguing finding requiring further elaboration below.

The present research contributes to previous work by providing a first meta-analytic test of outcome differentiation when investigating leadership processes. We qualified previous reasoning, based on matching levels (Lavelle

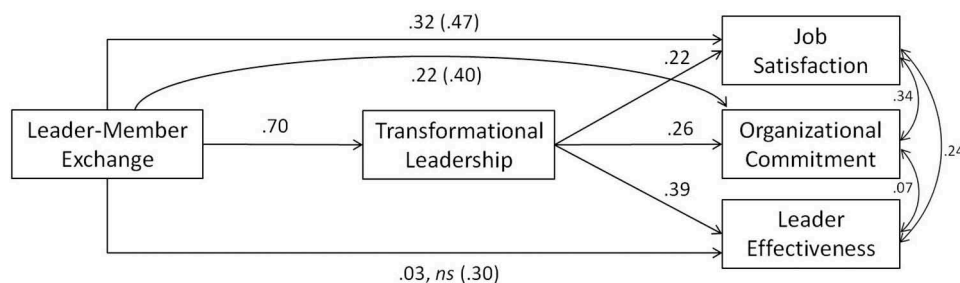


Figure 2. TFL as mediator of LMX–outcome relations (alternative reversed model).

Note: All path coefficients are statistically significant at $p < .001$ unless noted otherwise. In parentheses we present path coefficients for the direct effects of LMX before the mediator was entered.

et al., 2007) and the correspondence of focus (van Dick et al., 2004), which suggests that, depending on the proximity of the outcome to the dyadic relationship between leader and follower, the LMX mediator function and the TFL direct effects vary in strength. In the differential impact model, proximity relates to outcomes' proximal versus distal receptiveness to influences by leader relations. Close proximity enhances the impact of TFL's indirect effects via LMX on outcomes, whereas distal proximity enhances the impact of TFL's direct effects on outcomes. These findings stress the importance of distinguishing between outcome variables to gain a better understanding of the processes by which leader behaviours and relationships influence followers, leaders, teams, and organizations.

Theoretical implications

Our results provided insights into how transformational leaders influence their followers and themselves. Although it has been stressed that LMX plays an essential mediating role in critical organizational outcomes (Dulebohn et al., 2012), only a few studies tested this mediation (see Shusha, 2013; Wang et al., 2005). In line with these studies, our findings support the reasoning that LMX acts as a mediator in the relationships between TFL and employee outcomes, such as job satisfaction and organizational commitment. Relationships between leaders and followers, and followers' perception of these relationships, determine how employees experience their jobs and how they affectively relate to the organization (e.g., Brower et al., 2000; Cogliser et al., 2009; Maslyn & Uhl-Bien, 2001). Hence, relational leadership theory applies to our findings showing that leaders who engage in providing visions, shared goals, and inspiration, also engage in high-quality relationships with their employees, and that these relationships foster employees' positive evaluations of their jobs and their affective commitment to the organization. These findings also underline the assumption of leaders as agents in employees' relations with their jobs and their organizations (Lee & Taylor, 2014), and suggest that LMX is a form of social exchange (Bernerth et al., 2007).

However, and most importantly, our findings also suggest that LMX's mediating role is not equally strong in each relationship between TFL and different outcomes. Our results indicate that, as a proximate employee outcome, job satisfaction is more strongly influenced by the indirect effect of TFL via LMX than by TFL's direct effect. This is probably due to relationships being a key factor in how followers experience their work situation (Brower et al., 2000). Conversely, TFL and LMX contributed equally to organizational commitment, which is a more distal employee measure. The identification and internalization processes that transformational leaders activate are as essential for promoting followers'

organizational commitment as positive relationships between followers and leaders, because the leader represents the organization in her behaviours and relationships. The proximity argument in our differential impact model suggests that proximal employee outcomes require more high-quality relations, whereas more distal outcomes are attained by equal contributions of high-quality relationships and transformational leadership behaviours.

The theoretical underpinnings seem to differ in respect of leader effectiveness. Even though previous findings and theorizing sets up for the mediating role of LMX in the relationship between TFL and leader effectiveness (e.g., Bauer et al., 2006; Cogliser et al., 2009; Klein & Kim, 1998; Naidoo et al., 2010), our data do not support this reasoning. Instead, the effect of LMX was non-significant when simultaneously regressing leader effectiveness on LMX (as mediator) and TFL as an independent variable. Transformational leadership behaviour thus seems vital for leader effectiveness. Furthermore, adding high-quality relationship over and above transformational behaviour does not facilitate TFL's effect. In this study, leader effectiveness was represented in various forms, including objective measures, as well as supervisor, peer, and employee ratings, although the latter was most frequently applied. Perceptions of leaders' effectiveness and job performance were drawn from their visionary and inspiring behaviours, rather than from their good relations with their followers. Transformational leaders act as role models for their followers by demonstrating desired and exemplary behaviours that not only facilitate employees' favourable attitudes and behaviours, but also allow their own effectiveness to increase, whereas high-quality relations seem not to additionally contribute to leaders' effectiveness. This is an intriguing finding supporting our *differential impact model* by suggesting that organizational outcomes need to be distinguished according to their receptiveness and proximity to leader–follower relations.

One possible implication of our results might be that transformational leadership contributes an alternative path to facilitating distal outcomes. It seems viable to argue that particularly *in situations* where leaders are unable to build high-quality relations with all followers, transformational leadership may still warrant positive influences at least on distal outcomes. Our findings nevertheless suggest that LMX seems to be important for leader effectiveness by positively affecting TFL. That is, we tested and found support for an alternative theoretical model proposing TFL as a mediator of LMX–outcome relations. This model suggests that leaders benefit from high-quality relations, because these relations contribute to transformational leadership behaviours. Leaders' visionary, inspirational, and shared goal setting behaviour can only be transferred into action when good relations are in place. The theoretical implications derived from these findings resonate with recent

theoretical developments. In this respect, Lee and Taylor (2014) suggest that leaders may use LMX not only for their role as their organization's agents, but also for self-serving and economic reasons. Such principal-managers build good relations with selected employees in an attempt to advance their personal economic interests, such as outperforming their peers, without necessarily contributing to their organization or supporting their team. Similarly, low-quality LMX relationships have been described as economic exchange relationships (Wayne et al., 2009) that could negatively impact the effective use of transformational leadership behaviours. Given the strong co-occurrence of TFL and LMX in the field, future experimental research is needed to distinguish the impact of TFL in conjunction with low LMX and the impact of LMX in conjunction with low TFL on outcomes with varying proximity. Such an experimental paradigm would provide further substantial empirical evidence for the differential impact model.

In sum, the differential impact model appears to not only predict the strength of the indirect effect, but also its direction: TFL supports LMX, which contributes to employee-focused outcomes; LMX supports TFL, which impacts leader-focused effectiveness positively. We can conclude that LMX may not be a universal mediator, whereas leaders' relations and behaviours impact outcomes differentially. Our findings thus not only qualify theorizing pertaining to the processes by which leaders' behaviours and relationships influence important outcomes, but they also stress the need to acknowledge the importance of distinguishing between different outcomes when investigating leadership processes. The proximity dimension in the differential impact model contributes to such an approach, and might inform future research focusing on other dependent variables that can be distinguished along this dimension, such as job motivation (proximal), creativity (distal), and conflicts (proximal).

Limitations, future research, and practical implications

We focused on two employee outcomes and one leader outcome. These three outcomes enabled the outcome differentiation on the proximity dimension as well as enabled us to extend previous reasoning to a leader outcome. As included in this study, low proximity to leader-follower relations characterizes leader effectiveness, as our results indicate. An example of a leader outcome with high proximity would be the leader's trust or experienced procedural justice. Future research is encouraged to extend the differential impact model assessment to a wider range of leader outcomes in order to provide a clearer picture of LMX's and TFL's differential impact on these outcomes. The mediation role of TFL in the LMX-leader outcome association could be assessed for a variety of different leader outcomes.

A potential alternative explanation of the current findings pertaining to the differences between employee outcomes and the leader outcome is the shift in reference in the dependent variable. That is, one might argue that LMX mediates effects between leadership behaviours and outcomes only for employee outcomes and not for leader outcomes, because leader-employee relationships affect employees more than leaders. However, our differential findings for the two employee outcomes (based on their proximity to LMX) seems to speak against this alternative explanation, and seems to support our reasoning that proximity of the dependent variable rather than referent matters. Of course, future research could set out to test this reasoning by including leader outcome variables that might be more proximal to LMX, like leader job satisfaction or commitment. Additionally, there is still relatively little research connecting LMX to leader effectiveness, which might explain the lack of support for the mediating role of LMX for leader effectiveness. Future research could set out to expand this research, also given the potential interesting "strategic use of LMX" research avenue (Lee & Taylor, 2014). As such, it might be interesting to study how LMX can be used to shape TFL which in turn affects leader effectiveness.

Linking our differential impact model with the growing literature on leadership consensus (Cole, Bedeian, & Bruch, 2011) and differentiated leadership (Wu et al., 2010) would offer interesting extensions of predictions concerning LMX, TFL, and different outcomes. The literature showed that consensus and differentiation in leadership behaviours contribute additional aspects to the facilitation of organizational outcomes, particularly to employee and team outcomes. It is likely that high consensus and low differentiation contribute to high-quality leader-follower relations in teams, which in turn could foster proximate and distal employee outcomes. Future research could investigate these predictions and extend them by implementing the differentiation of outcomes based on proximity.

Another fertile extension of the differential outcome model refers to additional aspects of full-range leadership behaviours, that is, transactional leadership. While TFL may specifically entail the social aspects of leader-member exchange, transactional leadership (and especially its contingent reward sub-dimension) may dovetail with more economic exchange relationships (Wayne et al., 2009). Hence, the differentiation of social versus economic LMX (Kuvaas, Buch, Dysvik, & Haerem, 2012), which suggests exchange relations of different qualities, would allow a refined mediator model that could explain transactional leadership's effects on outcomes. Moreover, although our goal was to examine how LMX mediates the relationships between TFL and different outcomes in general, it would be valuable to test how situational factors influence the proposed relationships. The structure of

work could be a potential relevant situational factor (Humphrey, Nahrgang, & Morgeson, 2007). For instance, work under time pressure could influence the link between TFL, LMX, and outcomes. Transformational leaders working under time pressure might not have the time to build high-quality relationships, or to consider each of their followers' needs, which could result in a weaker relationship between TFL and LMX. In turn, this might mostly affect more relationship-oriented outcomes negatively. However, since time pressure might not always be directly measurable, related variables or proxies for pressure and stress, such as the job type, industry, type of task, or economic situation, could be analyzed. These examples indicate that situational factors may be important for leaders' behavioural and relational impact on organizational outcomes. Furthermore, diversity has been found to interact with transformational leadership (Kearney & Gebert, 2009; Shin & Zhou, 2007). In diverse teams, TFL's relational qualities may play a specifically crucial role, making the mediating role of LMX more prevalent in more diverse rather than in more homogeneous teams.

Similarly, previous research has shown that LMX might have different effects on follower versus leader-rated outcomes. In this respect, it has been found that leaders and followers value different aspects in their exchange relationships (e.g., Schyns & Wolfram, 2008). This effect might also be explained by the specific measurement of LMX, which focuses mostly on the subordinate and might require updating with a unique focus on the exchange currencies that managers value (Maslyn, Carsten, & Huang, 2015). Future research could set out to test the current model by using a more inclusive LMX measure.

Given the relatively limited amount of research that has distinguished between the four TFL sub-dimensions, we decided to focus on the broad transformational leadership concept by examining the underlying behaviours used to influence followers as a composite score (Yukl, 2010). However, we acknowledge that the different sub-dimensions of transformational leadership might be more or less strongly related to LMX. For instance, individualized consideration—defined as providing subordinates with support, encouragement, and coaching—is likely to be more strongly related to LMX, as well as to relationship-focused outcomes than, for instance, intellectual stimulation. The latter is characterized as increasing followers' awareness of problems and making them view problems from a different perspective. Future research could examine these ideas more systematically (see also van Knippenberg & Sitkin, 2013).

We believe that our findings have relevant implications for organizations, because they suggest that TFL behaviours might enhance the quality of the relationships between followers and leaders, and that these preferred relationships in turn affect employee outcomes positively.

Similarly, our findings suggest that leaders, depending on the outcome variable of interest, should focus more on either TFL or LMX strategies. LMX strategies are more likely to enhance relationship-based outcomes, whereas TFL strategies focusing on role modelling are more likely to promote the improvement of task-related outcomes, such as leader effectiveness. In conclusion, both leadership behaviours are important for organizations and should thus be a part of development programmes for leaders. However, research has not yet found a training that effectively teaches leaders to develop high-quality relationships, or to apply TFL strategies. This could be a fruitful objective for further research. Organizations can also tailor their interventions or training programmes to fit the outcome they wish to reach: If employees' job satisfaction is a concern, focusing organizational training programmes on relationships would suffice; on the other hand, if commitment should be enhanced, programmes could focus on leader behaviour—such as providing and communicating a vision—as well as on relationship building, whereas training programmes focusing on transformational leadership skills would be most suitable for enhancing leader effectiveness.

Conclusion

It has recently been suggested that LMX facilitates the process by which transformational leaders influence their followers' work outcomes. Our study suggests that this process might not be applicable to fostering leader effectiveness. The present study provides the first meta-analytic evidence that TFL's and LMX's relative contribution varies, depending on the proximity of the outcome to the relationship between leaders and followers. This implies that distinguishing between different kinds of outcomes when investigating how TFL influences critical organizational outcomes is crucial. We hope that our findings will motivate and inspire research in this field, and the development of stronger and novel theories on the processes through which transformational leaders affect organizational outcomes, with the ultimate goal of providing ideas on how this knowledge can be applied to organizations.

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Disclosure statement

No potential conflict of interest was reported by the authors.

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Supplemental data and research materials

Supplemental data for this article can be accessed at <http://dx.doi.org/10.1080/1359432X.2016.1170007>.

Notes

1. We argue that the distinction between an individual and a group focus in TFL might especially underscore the meaningfulness of the relational aspects driving the outcomes of transformational leadership, and thereby matches our focus on LMX as a potential mediator. However, in the current study, we do not differentiate between the individual and group-focused aspects of TFL, because (a) the purpose of this study is to more generally investigate the complementarities of leader behaviours and relations for employee and leader outcomes, and, most importantly, (b) this differentiation has only recently emerged, which means that the number of studies which could be used for a differentiated analysis is rather low and would severely limit the statistical power. We strongly encourage researchers to investigate the LMX-mediational model for individual-focused and group-focused TFL separately in future research (also see our discussion).
2. Moderator analyses revealed that the reliability of leadership measures did not affect the magnitude of the effect sizes (see Table 4). Regarding leadership measures, we found that effect sizes were stronger when the MLQ was used compared to other TFL measures for the association between TFL and effectiveness (.46 vs. .29), as well as job satisfaction (.44 vs. .37). Study design had significant effects on the associations between TFL and outcomes, as well as on the inter-correlations between the outcome measures. More precisely, cross-sectional designs showed higher effect sizes than longitudinal designs regarding the correlation between TFL and effectiveness (.46 vs. .07), TFL and job satisfaction (.47 vs. .22), TFL and commitment (.39 vs. .26), and between effectiveness and job satisfaction (.47 vs. .12), and effectiveness and commitment (.32 vs. .15). Interestingly, the reverse held regarding the association between job satisfaction and commitment, with the effect sizes being higher in longitudinal designs ($r = .61$) compared to cross-sectional designs ($r = .50$).
3. Student samples reported higher correlations than samples from business contexts regarding the association between TFL and effectiveness (.60 vs. .39) and between job satisfaction and commitment (.65 vs. .52). The cultural contexts affected six effect sizes; however, the direction of the effects varied. Studies conducted in the USA contexts reported stronger correlations between LMX and job satisfaction (.48 vs. .42), TFL and satisfaction (.50 vs. .35), between effectiveness and job satisfaction (.64 vs. .28) and

commitment (.33 vs. .16) compared to studies conducted outside the USA, whereas studies conducted outside the USA reported stronger correlations between TFL and commitment (.42 vs. .29) and between job satisfaction and commitment (.58 vs. .45) compared to studies conducted in the USA contexts.

4. Older samples of leaders and followers reported lower associations between TFL and job satisfaction, and leaders' older age was associated with lower correlations between leader effectiveness and job satisfaction (see Table 4). With regard to gender distributions, a higher percentage of male followers was associated with lower correlations between TFL and commitment.

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