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# The Differential Effects of Transformational Leadership on Multiple Identifications at Work: A Meta-analytic Model

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Employees' identifications are a valuable asset for modern organizations, and identification research has stressed the necessity to distinguish identifications according to their focus (i.e. organizational, team, or leader identification). Interestingly, transformational leadership (TFL) has been proposed to unfold its effects by transforming followers' identifications and could thus be a powerful way to actively manage identification. However, it remains unclear whether TFL affects identifications with different foci similarly or whether it predominantly influences a specific focus. To resolve this puzzle, the authors conducted a meta-analysis ( $k = 73$ ;  $N = 20,543$ ) and found that TFL (and each TFL sub-dimension) is more strongly associated with leader identification than with organizational identification or team identification. By presenting a comprehensive model of TFL's effects on identifications, we show that leader identification mediates the relationships between TFL and collective identifications (i.e. organizational identification or team identification), illustrating that relational identification plays a crucial role in subsequently shaping collective identifications. Implications for research and practice are discussed.

## Introduction

Identification connects employees to different aspects of their work context, such as the organization, the team, or the leader (i.e. foci of identification; Van Dick, 2001). Identification occurs when beliefs about another person or group become self-referential or self-defining (Pratt, 1998). Previous research demonstrates that identification enhances various organizational outcomes like performance, extra-role behavior, and employee retention (Kraus *et al.*, 2012; Riketta, 2005; Van Dick *et al.*, 2006, 2006b), as well as employee-focused outcomes such as well-being and satisfaction (Johnson *et al.*, 2006;

Van Dick and Haslam, 2012). However, identification scholars have stressed the importance of separating identifications according to their focus: It is important to know *what* the employee identifies *with*, because identification shapes employees' behaviors in such a way that the goals of the identification target are respected or internalized (Ullrich *et al.*, 2007; Van Dick *et al.*, 2004). Consequently, identifications with different foci have been shown to be differentially related to outcomes (Liu, Zhu, and Yang, 2010; Riketta and Van Dick, 2005; Van Knippenberg and Van Schie, 2000). The question of how identification with different foci can be facilitated is therefore of interest to both researchers and practitioners.

Interestingly, many leadership theories argue that leaders influence their followers mainly by shaping their identifications (Lord, Brown, and

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Freiberg, 1999; Reicher, Haslam, and Hopkins, 2005; Shamir, House, and Arthur, 1993). Especially charismatic–transformational leadership behaviors<sup>1</sup> (hereafter referred to as TFL Bass, 1985; Burns, 1978; Conger and Kanungo, 1994), which go beyond pure exchange relationships and have extraordinary effects on followers, are often empirically linked to identification, suggesting that identification is an important mediator of TFL's effects on other outcomes (Kark, Shamir, and Chen, 2003; Shamir *et al.*, 2000; Walumbwa, Avolio, and Zhu, 2008). Yet, previous empirical work has not systematically addressed the different foci of identification with respect to TFL. Some researchers have argued that TFL makes employees feel part of the larger collective and motivates them to work towards the team's or organization's goal, hence shaping collective identification with the team or the organization (Kark, Shamir, and Chen, 2003; Shamir *et al.*, 1998). Other researchers have emphasized the dyadic relationship between leader and follower (Hughes and Avey, 2009; Walumbwa and Hartnell, 2011), highlighting relational identification with the leader. The question therefore arises whether TFL shapes identifications uniformly or whether it is more strongly associated with particular identification foci.

The goal of this study is to shed light on the multiple relationships between TFL and identification with the leader, the team, and the organization in a meta-analytic framework. This approach allows us to provide an important contribution to the literature in terms of building a comprehensive model concerning the role of TFL (and its sub-dimensions) in shaping identifications with various foci. In this respect, we stress the importance of distinguishing identification according to its focus and explore whether TFL affects the different foci of identification similarly. More specifically, we integrate the diverging theoretical arguments about the effects of TFL on identification (i.e. the collective vs the relational reasoning) and establish leader identification as the primary outcome of TFL vis-à-vis collective identifications. Thereby,

our approach also contributes to the identification literature in that we explore TFL as a powerful proximal antecedent of the various identifications. To date, the TFL–identification relationship has only been considered from a leadership perspective, thereby overlooking the potential to use TFL to actively manage followers' identifications.

### *Social identification*

The concept of social identification is grounded in the social identity theory (Tajfel and Turner, 1986) and links the individual to its social environment. Specifically, identifications partially answer the question 'Who am I?' and refer to the extent to which individuals define themselves in terms of relationships to others or groups (Cooper and Thatcher, 2010; Pratt, 1998). Two broad levels of social identifications are distinguished: Collective identification describes the identification with a group, whereas relational identification occurs when one specific other person is integrated into the self-concept (Brewer and Gardner, 1996).

Modern organizations offer their employees a variety of identification targets, so-called foci, at both levels, such as the organization as a whole, the team, or the leader (Van Dick, 2001). On a conceptual level, identification implies that the unique set of values and goals associated with this specific focus of identification is integrated into the self and will guide future behavior accordingly (Ellemers and Rink, 2005). As such, leader identification has been conceptualized as the extent to which the leader is included in the follower's relational self (Kark and Shamir, 2002). Similarly, team and organizational identification can be defined as the degree to which people adopt defining characteristics of the team and organization into their self-concept (Van Dick and Wagner, 2002). Empirically, identifications with different foci are related, yet separable constructs in confirmatory factor analyses (Liu, Zhu, and Yang, 2010; Smith *et al.*, 2012; Van Dick *et al.*, 2004), which are differentially related to antecedents and outcomes (Olkonen and Lipponen, 2006; Riketta and Nienaber, 2007; Riketta and Van Dick, 2005). In this regard, the strongest effects of identifications have been found when identification and outcome correspond in focus or level (Van Dick *et al.*, 2004), which has also been referred to as the matching principle between identification and outcome (Ulrich *et al.*, 2007). Therefore, it is of utmost

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<sup>1</sup>We acknowledge that there are conceptual differences between different theories relating to transformational behaviors of leaders. However, they also share a substantial conceptual overlap (Van Knippenberg and Sitkin, 2013). We therefore use the label 'transformational leadership' (TFL) in an inclusive sense, also referring to other charismatic–transformational leadership behaviors.

importance to take the focus into account when studying identification (Albert, Ashforth, and Dutton, 2000).

Researchers have only recently begun to investigate systematically identifications with different foci simultaneously (Johnson *et al.*, 2006; Olkkonen and Lipponen, 2006; Van Knippenberg and Van Schie, 2000). We follow this line of research and study the three most prominent foci of identification in TFL research: team and organizational identification, jointly referred to as collective identifications, and leader identification (relational identification).

### *Transformational leadership and follower identification*

The social identity approach has been applied to leadership phenomena in a wide variety of ways and different theories, such as the self-concept leadership theory (Lord, Brown, and Freiberg, 1999) or the social identity approach to leadership (Reicher, Haslam and Hopkins, 2005), suggesting a close association between leadership and follower identification (see also Van Knippenberg *et al.*, 2004). More specifically, all of these theories propose that leaders are effective by shaping followers' self-concept. For instance, Reicher, Haslam, and Hopkins (2005) stated that 'the transformative potential of leaders lies in their ability to define shared social identities' (p. 560). Transformational leaders in particular have been proposed to influence their followers through processes of identification and internalization (Bass, 1985, 1998).

Transformational leadership is characterized by offering a purpose that transcends short-term goals and focuses on higher-order intrinsic needs (Judge and Piccolo, 2004). It can be defined as the articulation of a vision of the future that can be shared with peers and subordinates, intellectual stimulation of subordinates, and paying attention to individual differences between people (Yukl, 2013). In line with this definition, TFL consists of four dimensions, which comprise the articulation of a vision of the future (i.e. inspirational motivation), displaying conviction and appealing to followers on an emotional level (i.e. idealized influence), stimulating subordinates intellectually (i.e. intellectual stimulation) and paying attention to individual needs and differences between people (i.e. individualized consideration; Yukl, 2013).

Wang and Howell (2012) argued that 'the ability to influence different aspects of the followers' self-concept may be one of the mechanisms through which transformational leadership produces its effects' (p. 777). Indeed, when followers identify with another person or group of people, this entity becomes an important part of their self-concept. As a result, the salience of goals and tasks pertaining to that identity is elevated, and followers are motivated to contribute to them in order to act self-consistently (Cooper and Thatcher, 2010). In this respect, TFL has theoretically been argued to operate via collective identification (i.e. organizational or team identification) or relational identification (i.e. leader identification). Empirically, most prior research has separately investigated TFL related to identification with the leader, the team, or the organization, reporting positive relationships with all these identifications (e.g. Martin and Epitropaki, 2001; Walumbwa, Avolio and Zhu, 2008; Walumbwa and Hartnell, 2011). Moreover, some researchers have proposed that TFL might have *dual effects* (Kark and Shamir, 2007) in that it appeals to *both* the team and the individual members and simultaneously promotes relational and collective identifications (Kark, Shamir and Chen, 2003). Corroborating this idea, some studies found that TFL indeed exhibits positive relationships to both leader and team identification (Liu, Zhu, and Yang, 2010; Wang and Howell, 2012; Wu, Tsui, and Kinicki, 2010). Our study extends this prior research by proposing that TFL has differential effects on identifications with different foci.

### *Transformational leadership and different levels of identification*

*Collective identification: organizational and team identification.* Transformational leadership is often proposed to derive its effectiveness from its impact on followers' *collective* identification (Kark, Shamir, and Chen, 2003; Van Knippenberg *et al.*, 2004). Many transformational leadership behaviors are directed at the group of followers (Kark and Shamir, 2002) and focus on the group as a positive and distinct entity with shared past experiences and a common future (Klein and House, 1995; Mumford, 2006). By articulating a compelling vision (i.e. idealized influence) transformational leaders particularly appeal to followers' needs for affiliation, as they provide meaning for their group of followers as a whole (Mumford,

2006) and offer guidance by advocating a joint distal goal (Klein and House, 1995). Additionally, the leader's vision serves to align followers' values with those of the team or organization, while inspirational motivation emphasizes the group's unique qualification to perform well (Yukl, 2013). By paying attention to individuals' needs (i.e. individualized consideration), transformational leaders fulfill their followers' need for self-enhancement (Epitropaki and Martin, 2005). Finally, promoting out of the box thinking leads to feelings of acceptance and verification of differences (Kearney and Gebert, 2009). As such, TFL and its sub-dimensions highlight similarities between followers and enable them to realize that they are part of an attractive group that is larger than themselves (Wang and Howell, 2012). Ultimately, this motivates followers to transcend their self-interest and pursue the goals of their team or organization (Chang and Johnson, 2010; Kark, Shamir, and Chen, 2003; Shamir, House, and Arthur, 1993). In sum, TFL behaviors raise the salience of followers' group membership and underscore the attractiveness of being a group member (Hobman *et al.*, 2011), which should thus foster collective identifications.

*H1:* TFL (and each TFL sub-dimension) is positively related to collective identification with (a) the organization and (b) the team.

*Relational identification: leader identification.* The relevance of *relational* identification with the leader in TFL processes is highlighted by both early psychoanalytic theories (e.g. Kets De Vries, 1988) and socio-cognitive theories (Conger and Kanungo, 1998; Hughes and Avey, 2009). Indeed, the very concept of TFL stems from studying outstanding leaders (e.g. Burns, 1978; House, 1977) highlighting their extraordinary qualities (Bass, 1998; Conger, Kanungo and Menon, 2000; Hughes and Avey, 2009) and 'charismatic, exemplary, and exceptional [...] relation to their peers' (Cregan, Bartram, and Stanton, 2009, p. 704). Transformational leaders employ a highly personalized style by communicating *their* values and vision, inspiring motivation and providing followers with meaning and challenges (Shamir, House, and Arthur, 1993; Walumbwa and Hartnell, 2011; Yukl, 1999). They are, for instance, proactive, change-oriented and encourage followers to give up old ways of thinking (i.e. intellectual stimulation; Conger and Kanungo, 1987; Walumbwa,

Avolio, and Zhu, 2008). Consequently, old guidelines and norms lose their influence, and the leader serves as a new point of reference, which makes followers develop a strong bond with the leader (i.e. inspirational motivation). Furthermore, transformational leaders excellently fulfill their leadership role and 'connect individually with the followers' (i.e. idealized influence; Hughes and Avey, 2009, p. 542). They pay attention to individual needs, offer support and consideration, and develop and empower followers (i.e. individualized consideration; Bass, 1985; Shin and Zhou, 2003; Walumbwa and Hartnell, 2011). This in turn prompts followers to accept the leader's role model, which implies that followers 'mold their beliefs, feelings, and behaviors according to those of the leader' (Kark, Shamir, and Chen, 2003, p. 247). Thus, TFL behaviors demonstrate the leader's positive personal attributes and highlight the role-relationship between leader and follower, which jointly are the basis of strong leader identifications (Sluss and Ashforth, 2007).

*H2:* TFL (and each TFL sub-dimension) is positively related to relational identification with the leader.

#### *Comparing TFL's effects on collective vs relational identification*

Most prior studies have been limited to examining identification with only one focus, which is usually not selected based on a specific theoretical rationale. The identification literature, however, clearly suggests that identifications should be distinguished according to their foci. Yet, it remains unclear whether TFL similarly influences these different identifications.

Although TFL has been related to both relational and collective levels of identification, empirical research has primarily focused on the collective level (Carmeli, Atwater, and Levi, 2011; Hogg, 2001) and most studies have considered the link between TFL and organizational identification (Walumbwa, Avolio, and Zhu, 2008).

Nevertheless, early theoretical reasoning on TFL highlighted that leader identification is probably the *primary* mechanism through which TFL operates (Conger and Kanungo, 1987). Similarly Kark and Shamir (2002) found stronger effects of TFL on leader identification than on group identification in an explorative analysis. According to their reasoning, TFL is exhibited by – and

therefore closely tied to – the leader, thus rendering leader identification a very proximal outcome, while collective identifications are more distal outcomes and could thus be susceptible to a larger number of influences besides leadership behavior (paralleling the idea of the bandwidth–fidelity dilemma in personality research; Cronbach and Gleser, 1965).

Similarly, the *correspondence of focus* (Van Dick et al., 2004) in identification research suggests that the effects of identification on outcomes are strongest when identification and outcome correspond in level (cf. Ullrich et al., 2007). Extending this reasoning to antecedents of identification, the strongest associations are expected when antecedent and identification share the same focus. In this respect, TFL and leader identification correspond in focus and should thus shape identification with the leader more strongly than identification with the team or the organization.

In fact, it might seem self-evident for leader identification to be a more proximal outcome of TFL than collective identifications and that TFL exhibits the strongest association with leader identification. Nevertheless, TFL research has focused almost exclusively on collective identifications, which makes it essential to direct research attention to leader identification as a primary outcome. Taking these arguments together, we propose that TFL has stronger effects on relational identification than on collective identifications.

*H3:* TFL (and each TFL sub-dimension) is more strongly related to leader identification than to (a) organizational identification and (b) team identification.

#### *Leader identification mediates the effect of TFL on collective identification*

Extending the reasoning above, relational identification might drive the effects of TFL on more collective identification foci. Supporting this proposition, TFL's positive effects on outcomes have been argued to emerge in followers' relation to their leader rather than stemming from the leadership behavior per se (Conger, Kanungo, and Menon, 2000; Klein and House, 1995). In fact, a strong emotional relationship between leader and followers (Cregan, Bartram, and Stanton, 2009), in which leaders serve as important sense-givers, characterizes TFL (Epitropaki, 2013). As such, the relationship with the leader serves as a lens through which the whole work experience is

perceived (Seers and Graen, 1984): Leaders represent the collective to the individual follower (Eisenberger et al., 2002), act on behalf of the organization (Carmeli, Atwater, and Levi, 2011), and are responsible for integrating the individual into the team and the organization (Lord and Brown, 2001). Consequently, identification with the leader might be necessary to establish more collective forms of identification.

Furthermore, Lord, Brown, and Freiberg (1999) have suggested that leadership sequentially contributes to identification development with different foci. Whereas interpersonal concerns and relational identifications are considered first, collective identifications are developed thereafter based on relational identification. Similarly, Carmeli, Atwater, and Levi (2011) contended that relational identification with the leader fosters perceptions of oneness with the organization. That is, followers need to incorporate the leader first, before the *leader's* mission for the group becomes part of the self-concept and shapes collective identifications. Leader identification can thus be considered a prerequisite for the leader's ability to shape followers' collective identifications through TFL or its sub-dimensions. We therefore posit a mediational role of relational identification in the relationship between TFL and collective identifications.

*H4:* Leader identification mediates the relationships between TFL (and each TFL sub-dimension) and identification with (a) the organization and (b) the team.

## Method

We employed a meta-analytical structural equation modeling (MASEM) approach. First, we assessed the relationships between TFL (and its sub-dimensions) and identification with the organization, the team, and the leader to test Hypotheses 1 and 2. We also calculated the meta-analytic correlations between identifications with all three foci, because the full correlation matrix is a necessary precondition for MASEM (Bergh et al., 2014; Landis, 2013), which we in turn used to test Hypotheses 3 and 4.

#### *Literature search and inclusion criteria*

In our meta-analysis, we are interested in (1) the TFL–identification relationships and (2) relationships between identifications. For practical reasons, we decided to split the literature search

into two parts. First, we searched for relevant literature combining the generic keywords ‘leadership’ and ‘identification’ or ‘identify’ in a multi-database search (Academic Search Premier; Business Source Premier; EconLit; PsycInfo) in order to retrieve as many potentially relevant studies as possible. This literature search produced over 1,600 results. Furthermore, we searched for additional information on these relationships using the same keywords in Google Scholar and sent a request to share data via the Academy of Management’s ‘Organizational Behavior Division Listserv’.

Many of the retrieved studies did not study leadership behaviors or used the terms ‘identification/identify’ in the sense of ‘gaining insights’, but not as a concept of interest, narrowing the hits down to 85 studies. We then excluded studies that did not report data on the concepts of TFL and organizational, team, or leader identification as well as theoretical or review papers. We thus included studies reporting at least one association between TFL and identification with the organization, the team, or the leader (e.g. correlation, regression coefficients, or path coefficients), while excluding studies that, for instance, examined leadership behaviors other than TFL (e.g. authentic leadership) or identification with a different focus (e.g. professional identification).<sup>2</sup> If the required statistical information was not provided, it was requested from the corresponding author. In sum, 48 studies with  $k = 53$  independent samples and a total sample size of  $N = 15,426$  were included in the meta-analysis.

Second, we searched for all combinations of ‘organizational identification’, ‘organisational identification’, ‘work group identification’, ‘team identification’, ‘unit identification’, ‘relational identification’ and ‘leader identification’ in the same multi-database search, resulting in a total of 289 hits. Again, we searched for additional information in Google Scholar and sent a request to share data via the Academy of Management’s ‘Organizational Behavior Division Listserv’. Most of the retrieved studies did not investigate two or

more identifications, limiting our result to 38 hits. Of these, we included all studies that reported at least one association between identifications with the organization, the team, or the leader. Consequently, theoretical papers or studies assessing identification with foci besides the ones under study (e.g. professional identification) were not considered. Finally, 26 studies ( $k = 29$ ;  $N = 8,302$ ) were included in the meta-analysis.

Together, the search processes resulted in a total of 66 studies with  $k = 73$  samples ( $N = 20,543$ ) to be included in the meta-analysis, of which eight studies ( $k = 9$ ,  $N = 3185$ ) were retrieved in both searches.

Identification was most commonly assessed using Mael and Ashforth’s (1992, 1995) scale. Researchers usually used parallel versions of the same scale to assess identifications with different foci (i.e. replace the word ‘organization’ with ‘team’ or ‘leader’). Single studies used different identification measures, such as scales developed by Smidts, Pruyn, and Van Riel (2001) or Ellemers, Kortekaas, and Ouwerkerk (1999). Transformational leadership was most commonly studied using the Multifactor Leadership Questionnaire (MLQ; Bass and Avolio, 1995). Other TFL measures included the scales by Podsakoff *et al.* (1990) or by Conger and Kanungo (1994, 1998). The majority of studies used follower ratings (89%) to assess TFL, whereas the remaining studies used experimental manipulations or other ratings. None of the studies relied on leader self-report ratings.

Whereas some studies reported an overall TFL measure, others stated relationships between sub-dimensions of TFL and identification. We coded 37 studies with 41 samples ( $N = 13,279$ ) focusing on the overall TFL measure and 16 studies with 17 samples ( $N = 3,706$ ) focusing on the sub-dimensions of TFL. Of these, five samples were coded for both relationships (overall TFL and its sub-dimensions with identification).<sup>3</sup>

### Coding

*Identification.* We distinguished identifications according to their focus. Consequently, we coded identification with the organization, the team

<sup>2</sup>We later excluded two additional papers that initially fit our selection criteria. We excluded a paper by Epitropaki (2003) from our analysis, as the same data were used in the paper by Epitropaki and Martin (2005). Additionally, we did not include the data from Humphrey (2012), as all the provided correlations with organizational identification were counter-intuitive (e.g. a negative correlation with OCB and a positive correlation with laissez-faire).

<sup>3</sup>Owing to space limitation, no overview of the studies included in the meta-analysis is presented, but can be downloaded as Table S1 from the journal’s website.

(including work group and work unit) and the leader (including supervisor) as separate variables.

**Transformational leadership.** We coded overall TFL and its four distinct sub-dimensions (i.e. idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration). Scales measuring vision (articulation), ideological emphasis, role model, exemplary behavior, and acceptance of group goals were coded as idealized influence. Measures including high performance expectations, inspirational communication, and self-sacrifice were coded as inspirational motivation. The intellectual stimulation sub-dimension consisted of measures of engaging in unconventional behavior and not maintaining the status quo. Finally, supportive leadership behaviors, personal recognition, sensitivity to members' needs, and individualized support were subsumed under individualized consideration.

**Study characteristics.** We coded study and sample characteristics such as study method (e.g. survey, experiment), design (cross-sectional vs longitudinal) and level of analysis (individual vs group), number of participants, response rate, male percentage, mean age, and mean organizational tenure as well as first author's affiliation and year of publication.

**Coding process.** We used Pearson's correlation coefficient  $r$  to code the relationships of interest. If the study employed a survey design, we coded zero-order correlations between the study variables (regardless of further analyses). When other statistics were provided (e.g. in experimental settings), the effect size was transformed into  $r$  ( $r = \sqrt{\frac{F}{F+df_{err}}}$ , Rosenthal and DiMatteo, 2001).

The first author coded all studies and resolved any ambiguities with co-authors through consensus. Additionally, a second trained independent rater coded about 10% of the samples (study characteristics and effect sizes), resulting in 91% interrater agreement.

**Study characteristics.** Table 1 presents an overview of the study characteristics. The primary research mainly consisted of survey studies (96%), which were primarily conducted in the business context (62%), and used cross-sectional designs (84%). The studies were published between 1992 and 2014 with first authors from North America (27%), Europe (47%) and other parts of the world (26%). Participants were on average 35.98 years old ( $SD = 6.65$ ), and had an organizational tenure

Table 1. Summary of study characteristics ( $k = 73$ )

Variable	Value	<i>SD</i>	Min	Max
Year of publication	2007	5.03	1992	2013
Age	35.98	6.65	20.0	47.5
Male percentage	54%	24%	4%	100%
Response rate	61%	21%	26%	96%
Organizational tenure	7.00	4.12	0.1	15.3
<i>First author affiliation</i>				
North America	20			
Europe	34			
Others	19			
<i>Type of study</i>				
Survey	70			
Others	3			
<i>Level of analysis<sup>a</sup></i>				
Individual	65			
Group	9			
<i>Sector<sup>b</sup></i>				
Business	45			
Other	26			
<i>Design</i>				
Cross-sectional	61			
Longitudinal	12			
<i>Parallel instruments<sup>c</sup></i>				
Same scales used	23			
Different scales used	6			

Note: For categorical variables, the numbers in the table represent frequencies.

<sup>a</sup> One study analyzed the data at both the individual and the group level.

<sup>b</sup> The numbers do not add up to 73, as not all studies reported the relevant information.

<sup>c</sup> This applies only to those samples that assessed identifications with more than one relevant focus.

of 7.00 years ( $SD = 4.12$ ). On average, the samples consisted of 54% men ( $SD = 24\%$ ) and had a response rate of 61% ( $SD = 21\%$ ).

#### Data analysis

**Overall effect sizes.** We calculated effect sizes weighted by the inverse variance ( $r$ ) using random effects models, which take variability between samples and subject-level sampling error into account (Lipsey and Wilson, 2001).

Additionally, varying measurement reliability can affect the strength of variable associations. Therefore, we corrected for the reliability of the respective scales ( $r_{c_{xy}} = \frac{r_{xy}}{\sqrt{\alpha_x * \alpha_y}}$ ; Spearman, 1904) and calculated effect sizes corrected for attenuation. Following common meta-analytic procedure, we assessed the homogeneity of effect sizes based on the  $Q$ -statistics and in case of heterogeneity, used moderator analyses (meta-regressions for



continuous moderators, meta-analytic ANOVAs for categorical moderators; Lipsey and Wilson, 2001) to investigate the sources of variability (study characteristics, such as year of publication, study design, or response rate). The overall effect sizes allowed the evaluation of Hypotheses 1 and 2 and served as input for further analyses in MASEM.

*Meta-analytic structural equation modeling (MASEM).* Since Hypotheses 3 and 4 propose more complex models, meta-analytic structural equation modeling (MASEM) was conducted (Bergh *et al.*, 2014; Viswesvaran, and Ones, 1995). MASEM combines classical meta-analysis with structural equation modeling, which allows for a direct comparison of paths' strengths or the testing of complex models with several interdependent outcomes (Geiser, 2010).

We followed a two-step MASEM procedure (e.g. Cheung and Chan, 2005; for similar applications, see Deinert *et al.*, 2015; Jiang *et al.*, 2012). First, the population estimates of bivariate correlations were established meta-analytically. Second, these meta-analytically generated correlations (identifications with the organization, the team, and the leader, TFL and its sub-dimensions) were entered as data input into MASEM. We used the harmonic mean as samples size estimate (Bergh *et al.*, 2014; Landis, 2013; Viswesvaran and Ones, 1995).<sup>4</sup>

To test Hypothesis 3, we fitted a model in which all three identifications were simultaneously regressed on TFL (or its sub-dimensions) and calculated Wald chi-square tests (Muthén and Muthén, 2010; Wald, 1943) to assess whether the association between TFL and leader identification is stronger than that between TFL and team or between TFL and organizational identification. If the test is significant, the null hypothesis (the two paths are of equal strength) is rejected and Hypothesis 3 supported. For Hypothesis 4, we tested a structural model in which leader identification mediates the effects of TFL (or its sub-dimensions) on organizational and team identification. Specifically, we assessed the overall model fit as well as the indirect effects of TFL on organizational and team identification via leader identification (Preacher, Rucker, and Hayes, 2007). Additionally, we report 95% confidence intervals for indirect effects using a

Monte Carlo simulation (MacKinnon, Lockwood, and Williams, 2004; Selig and Preacher, 2008) to test our mediational model.

## Results

### *Meta-analytic correlations*

*TFL and identifications.* All meta-analytic correlations between overall TFL and identification with the three foci were positive ( $0.34 \leq r \leq 0.60$ ) and the corresponding 95% confidence intervals (CI) excluded zero, thus attesting to the statistical significance (Table 2). The results indicate that overall TFL had large effects on identifications with all three foci (Bosco *et al.*, 2015). As all three correlations were heterogeneous (all  $Q \geq 21.44$ , all  $p \leq 0.03$ ), we conducted moderator analyses to assess potential moderating effects of the coded study characteristics. The results again revealed that controlling for the influence of significant moderators via multiple regression analysis did not change the effect sizes of interest substantially (all  $\Delta r \leq 0.01$ ).

Similarly, we tested the relationships between sub-dimensions of TFL and identifications. Again, all the meta-analytic correlations were positive ( $0.18 \leq r \leq 0.57$ ) and 95% CI excluded zero (Table 2). The effect sizes for sub-dimensions of TFL and identifications tended to be slightly smaller than those of overall TFL, ranging from medium to large (Bosco *et al.*, 2015). Otherwise, the correlation pattern of overall TFL and its sub-dimensions exhibited no apparent differences. Heterogeneity tests demonstrated that five of the twelve effect sizes were heterogeneous (significant  $Q \geq 12.28$ , significant  $p \leq 0.01$ ). When statistically controlling for these significant moderators, the meta-analytic correlations of interest did not change substantially (all  $\Delta r \leq 0.07$ ). Taken together, these findings support Hypotheses 1 and 2.

*Identification with different foci.* The correlations between identifications with different foci were positive and of medium to large size ( $0.41 \leq r \leq 0.50$ ; Bosco *et al.*, 2015). Furthermore, two of the three meta-analytic correlations were heterogeneous ( $Q[df = 7] = 25.22$ ,  $p \leq 0.001$  and  $Q[df = 21] = 182.02$ ,  $p \leq 0.001$ ) and moderator analyses were conducted. However, when controlling for significant moderators via a multiple regression procedure, the meta-analytic correlations of interest did

<sup>4</sup>The result patterns remain stable when performing the same analyses based on correlations corrected for attenuation instead of raw correlations as effect sizes.

Table 2. Overview of the meta-analytic correlations including associated number of samples, and total sample sizes, 95% confidence intervals, 80% credibility intervals, corrected mean effect sizes and homogeneity statistics

Study relationship	<i>k</i>	<i>N</i>	ES <i>r</i>	<i>p</i>	95% CI		80% Cred I		ES <i>r<sub>c</sub></i>	<i>p</i>	<i>Q</i>	<i>df</i>	<i>p</i>
					lower	upper	lower	upper					
Overall TFL – org id	27	7669	0.37	<0.001	0.32	0.42	0.21	0.53	0.43	<0.001	122.84	26	<0.001
Overall TFL – team id	12	4728	0.34	<0.001	0.30	0.38	0.25	0.43	0.39	<0.001	21.44	11	0.03
Overall TFL – leader id	13	4909	0.60	<0.001	0.53	0.68	0.43	0.77	0.66	<0.001	80.70	12	<0.001
I-influence – org id	5	1407	0.33	<0.001	0.28	0.38	0.26	0.40	0.38	<0.001	3.63	4	0.46
I-influence – team id	5	1398	0.33	<0.001	0.26	0.40	0.25	0.41	0.39	<0.001	6.06	4	0.20
I-influence – leader id	4	1681	0.57	<0.001	0.45	0.70	0.44	0.70	0.66	<0.001	17.80	3	0.005
I-motivation – org id	6	1632	0.33	<0.001	0.26	0.39	0.24	0.42	0.40	<0.001	8.02	5	0.16
I-motivation – team id	7	1643	0.34	<0.001	0.24	0.44	0.19	0.49	0.40	<0.001	21.37	6	0.002
I-motivation – leader id	4	1618	0.49	<0.001	0.39	0.60	0.37	0.61	0.59	<0.001	13.21	3	0.004
I-stimulation – org id	5	1559	0.28	<0.001	0.23	0.33	0.24	0.32	0.36	<0.001	1.75	4	0.78
I-stimulation – team id	4	1327	0.18	<0.001	0.07	0.30	0.06	0.30	0.24	<0.001	12.28	3	0.07
I-stimulation – leader id	3	1075	0.46	<0.001	0.40	0.52	0.44	0.48	0.63	<0.001	0.20	2	0.90
I-consideration – org id	7	1879	0.32	<0.001	0.26	0.38	0.23	0.41	0.36	<0.001	9.17	6	0.17
I-consideration – team id	4	1327	0.30	<0.001	0.25	0.35	0.26	0.34	0.35	<0.001	1.05	3	0.79
I-consideration – leader id	5	1809	0.56	<0.001	0.45	0.66	0.43	0.69	0.62	<0.001	19.23	4	0.001
Org id – team id	22	5753	0.41	<0.001	0.33	0.49	0.18	0.64	0.49	<0.001	182.02	21	<0.001
Org id – leader id	8	2443	0.47	<0.001	0.39	0.55	0.34	0.60	0.54	<0.001	25.22	7	0.001
Team id – leader id	5	2053	0.50	<0.001	0.44	0.56	0.42	0.58	0.58	<0.001	7.03	4	0.14

Note: *k*, number of independent samples, on which the analyses are based; *N*, total number of individuals in all samples, on which the analyses are based; ES *r*, overall effect size based on raw correlations; 95% CI, 95% confidence interval; 80% Cred I, 80% credibility interval; ES *r<sub>c</sub>*, overall effect size based on correlations corrected for attenuation; *Q*, *Q* homogeneity statistics, *df*, corresponding degrees of freedom.

Org id, organizational identification; Team id, team identification; Leader id, identification with the leader. I-influence, idealized influence; I-motivation, inspirational motivation; I-stimulation, intellectual stimulation; I-consideration, individualized consideration;

not change substantially (all  $\Delta r \leq 0.07$ ). We therefore used the raw effect sizes for further analyses.<sup>5</sup>

#### Comparing the strength of meta-analytic correlations between TFL and identifications

Table 2 provides first evidence supporting Hypothesis 3: the meta-analytic correlations of overall TFL (and its sub-dimensions) and leader identification are larger than those between overall TFL (and its sub-dimensions) and organizational or team identification, and the 95% CI around the respective meta-analytic correlations do not overlap in four of the five cases. Furthermore, we statistically tested Hypothesis 3 by conducting separate Wald chi-square tests in MASEM to compare the strength of TFL's associations with (a) organizational identification vs leader identification and (b) team identification vs leader identification (see Table 3 for a detailed overview).

<sup>5</sup>Owing to space limitations, the complete results of the moderator analyses for heterogeneous effects are not included, but can be obtained from the first author upon request.

The results show that the relationship between overall TFL and leader identification is stronger than the relationship between overall TFL and organizational identification ( $\chi^2(1) = 195.04$ ,  $p < 0.001$ ) and between overall TFL and team identification ( $\chi^2(1) = 269.21$ ,  $p < 0.001$ ). Similarly, the results of the Wald chi-square tests show that for all four sub-dimensions the correlation with leader identification is significantly larger than the ones with team or organization identification (all  $\chi^2(1) \geq 47.53$ ; all  $p < 0.001$ ). Hence, these results support Hypothesis 3 and again indicate no differential effect patterns of overall TFL and its sub-dimensions.

#### Mediation analysis in meta-analytic structural equation modeling

We tested the proposed overall model (Hypothesis 4) stating that leader identification mediates the relationships between TFL (and its sub-dimensions) and organizational and team identification via MASEM. We first specified the model to contain the paths from overall TFL to leader identification and from leader identification to team and

Table 3. Overview of the Wald chi-square difference test for the comparison of relationship strength between leadership and identifications with different foci

	Wald $\chi^2$	Df	p	N
<i>Overall TFL</i>				
Overall TFL – leader id > overall TFL – org id	195.04	1	<0.001	3713
Overall TFL – leader id > overall TFL – team id	269.21	1	<0.001	3713
<i>Idealized influence</i>				
I-influence – leader id > i-influence – org id	110.85	1	<0.001	1929
I-influence – leader id > i-influence – team id	117.91	1	<0.001	1929
<i>Inspirational motivation</i>				
I-motivation – leader id > i-motivation – org id	51.11	1	<0.001	2065
I-motivation – leader id > i-motivation – team id	47.53	1	<0.001	2065
<i>Intellectual stimulation</i>				
I-stimulation – leader id > i-stimulation – org id	55.78	1	<0.001	1769
I-stimulation – leader id > i-stimulation – team id	150.50	1	<0.001	1769
<i>Individualized consideration</i>				
I-consideration – leader id > i-consideration – org id	118.72	1	<0.001	2066
I-consideration – leader id > i-consideration – team id	149.79	1	<0.001	2066

Note: Significant chi-square tests indicate that the compared paths are unequal: leader id, leader identification; org id, organizational identification; team id, team identification.

organizational identification. The overall fit was satisfactory ( $\chi^2(2) = 61.51$ , RMSEA = 0.09, SRMR = 0.03, TLI = 0.95, CFI = 0.99). The RMSEA is slightly above the recommended cut-off criterion of 0.08 (Vandenberg and Lance, 2000), but can be misleading when the degrees of freedom are small, as in our model (Kenny, Kaniskan, and McCoach, 2011). The proposed overall model can therefore be regarded as acceptable. All path coefficients of the model (0.47–0.60; all  $p < 0.001$ ) and both indirect effects (TFL to organizational identification: 0.28;  $p < 0.001$ , 95% CI [0.26, 0.30]; TFL to team identification: 0.30,  $p < 0.001$ , 95% CI [0.28, 0.32]) were substantial, thus supporting Hypothesis 4.

Furthermore, we explored additional direct effects of overall TFL on team or organizational identification, which would indicate partial mediation. As the models are nested, we used the chi-square difference test to examine the superiority of the model when the direct path is added. Figure 1 shows the final model pertaining to overall TFL and identification, which exhibited a better fit when the direct path from TFL to organizational identification was added ( $\chi^2(1) = 12.40$ , RMSEA = 0.06, SRMR = 0.01, TLI = 0.98, CFI = 1.00;  $\Delta\chi^2/\Delta df = 49.12$ ,  $p < 0.001$ ). An additional direct path from TFL to team identification did not improve model fit ( $\chi^2(1) = 58.12$ , RMSEA = 0.12, SRMR = 0.03, TLI = 0.91, CFI = 0.99;  $\Delta\chi^2/\Delta df = 3.40$ ,  $p = 0.07$ ).

We performed the same analyses using the four TFL sub-dimensions. Hence, we tested TFL's indirect effects on team and organizational identification via leader identification first and then checked for additional direct effects on team and organizational identification. The results indicate that also for the four sub-dimensions leader identification mediates TFL's relationships with team and organizational identification. As Figure 2 illustrates, all paths pertaining to the indirect effect are medium to large and significant (Bosco *et al.*, 2015). Similarly, all hypothesized indirect effects are significant (TFL sub-dimensions to organizational identification via leader identification: 0.20–0.24,  $p < 0.001$ , 95% CI [0.17–0.21, 0.23–0.27]; TFL sub-dimensions to team identification via leader identification: 0.22–0.28,  $p < 0.001$ , 95% CI [0.19–0.25, 0.24–0.31]). Mirroring the results of overall TFL, the additional direct paths from TFL to organization identification are (very) small (0.08–0.13). Moreover, a second direct path from TFL to team identification emerged as significant with (very) small effect sizes (–0.06–0.13) for three of the four models. While we found positive direct effects of idealized influence and inspirational motivation on team identification, the direct effect of intellectual stimulation on team identification was negative. In sum, the mediation models of overall TFL and its sub-dimensions support Hypothesis 4.

*Alternative models.* Based on previous theorizing, we tested two alternative models (see Table 4

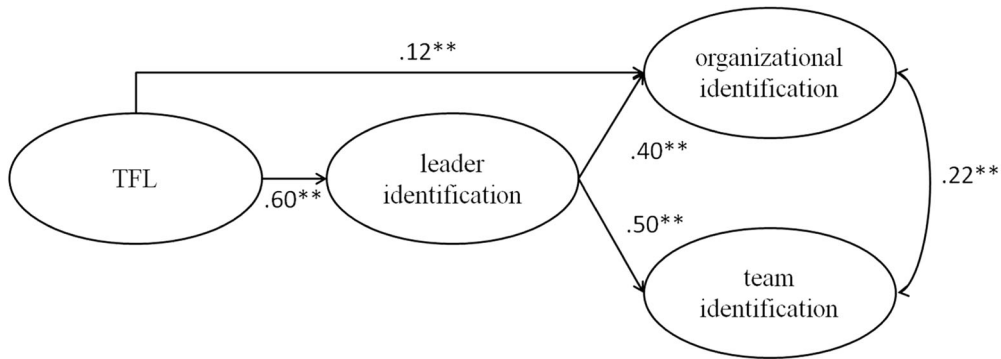
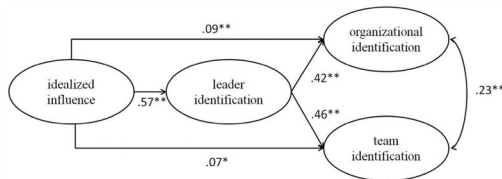
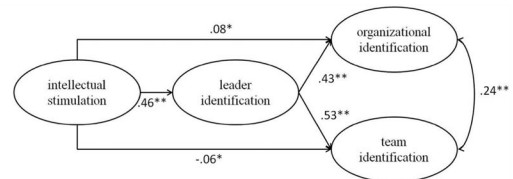


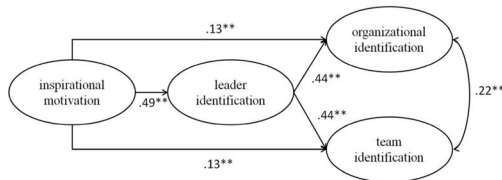
Figure 1. Results of the structural model of the effects of overall TFL on organizational and team identification via leader identification.  $N = 3713$ ,  $** p < 0.001$ . All the path coefficients are significant. Both indirect effects are significant and small to medium sized (TFL → organizational identification: point estimate:  $0.24^{**}$ , 95% CI: [0.21; 0.26]; TFL → team identification: point estimate:  $0.30^{**}$ , 95% CI: [0.28; 0.32])



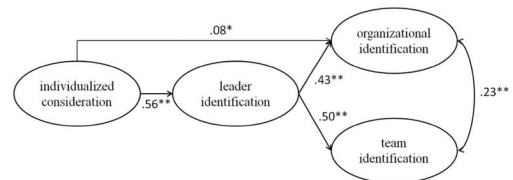
No model fit computable,  $df = 0$ ,  $N = 1929$ ; indirect effects:  
 TFL → organizational identification:  $0.24^{**}$ , 95% CI: [0.21; 0.27];  
 TFL → team identification:  $0.26^{**}$ , 95% CI: [0.23; 0.30].



No model fit computable,  $df = 0$ ,  $N = 1769$ ; indirect effects:  
 TFL → organizational identification:  $0.20^{**}$ , 95% CI: [0.17; 0.23];  
 TFL → team identification:  $0.24^{**}$ , 95% CI: [0.21; 0.27].



No model fit computable,  $df = 0$ ,  $N = 2065$  indirect effects:  
 TFL → organizational identification  $0.20^{**}$ , 95% CI: [0.17; 0.23];  
 TFL → team identification:  $0.22^{**}$ , 95% CI: [0.19; 0.24].



$\chi^2(1) = 1.61$ , RMSEA = .02; SRMR = .01; TLI = 1.00; CFI = 1.00;  
 $N = 2066$ ; indirect effects:  
 TFL → organizational identification:  $0.24^{**}$ , 95% CI: [0.21; 0.27];  
 TFL → team identification:  $0.28^{**}$ , 95% CI: [0.25; 0.31]).

Figure 2. Results of the structural model of the effects of transformational leadership's sub-dimensions on organizational and team identification via leader identification.

Note. \*  $p < 0.01$ ; \*\*  $p < 0.001$

for an overview). First, we tested a model in which TFL predicted leader identification, which in turn predicted team identification and subsequently led to organizational identification (Alternative 1). This model reflects the nested structure of several identifications moving from more proximal to more distal foci of identification (i.e. the leader is part of the team, which is part of the organization; cf. Ashforth and Johnson, 2001). This model did not fit the data well, neither

for overall TFL ( $\chi^2(3) = 504.87$ , RMSEA = 0.21, SRMR = 0.12, TLI = 0.74, CFI = 0.87) nor for the TFL's sub-dimensions (all  $\chi^2(3) \geq 248.44$ , all RMSEA  $\geq 0.20$ , all SRMR  $\geq 0.10$ , all TLI  $\leq 0.87$ , all CFI  $\leq 0.74$ ).

Second, we followed prior findings regarding TFL's parallel influence on leader and team identification (e.g. Wang and Howell, 2012) and examined whether TFL simultaneously fosters leader and team identification (Alternative 2). As

Table 4. Overview of model fit indices for proposed indirect model and alternative models

	$\chi^2$	df	RMSEA	SRMR	CFI	TLI	N
<i>Overall TFL</i>							
Proposed model	61.51	2	0.09	0.03	0.95	0.99	3713
Alternative 1	504.87	3	0.21	0.12	0.74	0.87	3713
Alternative 2	836.36	3	0.27	0.13	0.57	0.79	3713
<i>Idealized influence</i>							
Proposed model	18.11	2	0.07	0.02	0.98	0.99	1929
Alternative 1	248.44	3	0.21	0.11	0.74	0.87	1929
Alternative 2	420.92	3	0.27	0.13	0.56	0.78	1929
<i>Inspirational motivation</i>							
Proposed model	55.57	2	0.11	0.04	0.91	0.97	2065
Alternative 1	302.14	3	0.22	0.12	0.67	0.84	2065
Alternative 2	424.12	3	0.26	0.12	0.54	0.77	2065
<i>Intellectual stimulation</i>							
Proposed model	24.27	2	0.08	0.03	0.95	0.99	1769
Alternative 1	236.20	3	0.21	0.10	0.69	0.84	1769
Alternative 2	553.71	3	0.32	0.16	0.26	0.63	1769
<i>Individualized consideration</i>							
Proposed model	12.73	2	0.05	0.02	0.98	1.00	2066
Alternative 1	259.42	3	0.20	0.11	0.74	0.87	2066
Alternative 2	498.78	3	0.28	0.13	0.51	0.75	2066

Note: Proposed model: leader identification mediates the relationship between TFL (or its sub-dimensions) and team and organizational identification.

Alternative 1, TFL (or its sub-dimensions) shapes identifications consecutively, ranging from more proximal to more distal identifications (i.e., TFL → leader id → team id → org id).

Alternative 2, TFL (or its sub-dimensions) parallelly shapes leader and team identification, which in turn inform organizational identification.

employees interact directly with both their leader and their team in their everyday work experience, identification with these two foci might in turn shape employees' organizational identification. Again, the results indicated a poor model fit for overall TFL ( $\chi^2(3) = 836.36$ , RMSEA = 0.27, SRMR = 0.13, TLI = 0.57, CFI = 0.79) as well as for its sub-dimensions (all  $\chi^2(3) > 420.92$ , all RMSEA  $\geq 0.27$ , all SRMR  $\geq 0.12$ , all TLI  $\leq 0.79$ , all CFI  $\leq 0.57$ ).

We conclude that the tested alternative models do not explain the data better than our proposed model. This enhances confidence in our results and underscores the proposed indirect effects of TFL on team and organizational identification via leader identification.

## Discussion

Much TFL research has theoretically and empirically linked TFL to identification as a way to attain the effects of TFL on distal outcomes (Conger

and Kanungo, 1987; Shamir, House and Arthur, 1993), rendering identification a proximal consequence of TFL. However, it has remained unclear whether overall TFL (and its sub-dimensions) similarly influences identifications with different foci, even though identification researchers have strongly advocated the distinction of identification foci. Furthermore, understanding how proximal antecedents can be used to actively manage employees' identifications is a crucial endeavor for researchers and practitioners in order to benefit from the myriad positive outcomes associated with identification. By combining the lines of identification research and TFL research, our meta-analysis sheds new light on the relationships between TFL and identification with the organization, the team, and the leader. Although TFL is positively associated with all three foci of identification, it is most strongly related to leader identification. Furthermore, our results demonstrate that leader identification (partially) mediates TFL's effects on collective identifications, which suggests that leader identification acts as a mechanism through which

leaders can influence collective identifications. Our analyses show similar results for overall TFL and its four sub-dimensions.

### *Theoretical implications*

Our meta-analysis summarizes the large body of research findings on TFL and identification and provides insights into the complex consequences of TFL. In this respect, the proposed model indicates that TFL primarily shapes leader identification, which in turn affects collective types of identification, such as team and organizational identification. These meta-analytic results are in line with Lord, Brown, and Freiberg's (1999) proposition that leadership usually shapes relational identifications before collective identifications. Furthermore, the results corroborate exploratory analyses demonstrating a mediating effect of leader identification on the relationship between TFL and collective identification (Carmeli, Atwater, and Levi, 2011; Hobman *et al.*, 2011), but differ from prior research showing parallel effects of TFL on leader and team identification (e.g. Kark, Shamir, and Chen, 2003; Wang and Howell, 2012; Wu, Tsui, and Kinicki, 2010). Consequently, the current findings offer a novel integration of TFL's effects on identification and enable a better understanding of the multiple processes that TFL triggers. Through highlighting leader identification as the mediating mechanism, the results stress the dyadic dimension of TFL and suggest that the focus on the leader prominent in early work on TFL (Burns, 1978; Conger and Kanungo, 1987) should be revived. Specifically, our results call for a shift from focusing on collective identification to broader approaches underscoring the importance of relational identification with the leader.

Furthermore, our focus on the overall TFL construct and its sub-dimensions fits Van Knippenberg and Sitkin's (2013) recent call to consider specifically TFL's sub-dimensions. Our results show converging evidence for overall TFL and its sub-dimensions and their associations with identification foci. As such, our results diverge from previous work that has found differential effects of TFL's sub-dimensions (Hobman *et al.*, 2011; Wang and Howell, 2012), as the four models only differed slightly with respect to the additional direct effects of TFL sub-dimensions on collective identifications. Interestingly, some prior research

only associated group-focused TFL exclusively with team identification and individual-focused leadership with leader identification (Tse and Chiu, 2014; Wang and Howell, 2012; Wu, Tsui, and Kinicki, 2010). Again, the current results do not seem to support this reasoning, which could imply that the distinction between group-focused and individual-focused leadership is less relevant when examining identification. However, we should be careful about drawing strong conclusions from these data, given that the number of primary samples, on which the effect sizes are based, is small. Therefore, more research is needed that specifically focuses on TFL's sub-dimensions (or group-focused vs individual-focused TFL) to explore further the communalities and differences in their influence on identifications.

The presented findings also contribute to the social identity approach to leadership (Reicher, Haslam, and Hopkins, 2005). First, our meta-analysis channels the large body of research on TFL and identifications back to focus specifically on TFL-identification relationships. Thereby, the findings provide meta-analytic support for the suggestion that leadership affects follower identification (Lord, Brown, and Freiberg, 1999). Second, our results refine this approach by highlighting different foci of identification, as TFL does not affect identification with the leader, the team, and the organization equally. Consequently, identification foci need to be distinguished in order to represent the effects of leadership on identification adequately.

Finally, our results make two important contributions to the identification literature. First, the presented model could guide researchers to carefully select a focus of identification to study, depending on their research question and the expected underlying process. More specifically, research on TFL's dyadic processes and outcomes might zoom in on leader identification. In contrast, collective identification is needed when collective effects are the main focus of the research question (cf. Van Dick *et al.*'s [2004] work on the correspondence of focus in identification). Whenever feasible, however, we recommend considering multiple foci of identification simultaneously in order to capture the complex processes involved.

Second, the meta-analytic correlations between identifications with different foci are of medium to large size and heterogeneous. This finding

corroborates the understanding that identifications with different foci are related yet separable constructs (e.g. Van Dick, 2001). Hence, the question arises how identifications with different foci converge (Sluss and Ashforth, 2007). Interestingly, the presented model offers a first answer to this question by suggesting that relational identification enables the leader to shape collective identifications (Howell and Shamir, 2005). This implies that a transformational leader can, for instance, transmit his or her own organizational and team identification to followers (Schuh *et al.*, 2012) and might thus align followers' leader, team, and organizational identifications through the same leadership behavior.

#### *Limitations and future research*

While our research contributes valuable insights into TFL's impact on identification with different foci, it also has limitations. Our analyses are based on primary research that consists mostly of survey data, from which no causal inferences can be drawn. Yet, several reasons suggest that common method bias is unlikely to be the primary driver of the results: First, we carefully derived our hypotheses from existing research on TFL and identification. Second, when controlling for study design (cross-sectional vs longitudinal) as a moderator, the obtained meta-analytic effect sizes were not altered substantially. Finally, common method bias cannot account for differential effects (Van Knippenberg and Sleebos, 2006). Nevertheless, additional multi-wave longitudinal field studies or (quasi-)experimental work should be conducted to validate this model further.

Future research could, for instance, study newly built teams across several time points, thus not only testing the validity of the proposed model, but also shedding further light on the temporal development of identifications. This would be particularly interesting, as prior research has demonstrated that it takes time for TFL to unfold its effects on followers (Hoffman *et al.*, 2011), and identification has been argued to develop over time (Jones and Hamilton Volpe, 2011; Smith *et al.*, 2013). Applying these thoughts to the presented model and drawing on Lord, Brown, and Freiberg's (1999) proposition that leader identification is developed earlier than collective identifications, leader identification might first take time to be built. Once established, leader identification

might already affect outcomes specifically associated with it (e.g. speaking up to the leader; Liu, Zhu, and Yang, 2010). However, only after leader identification has developed, can collective identifications be shaped over time and then affect behaviors such as extra-role behavior towards the team (Riketta and Van Dick, 2005).

Another limitation of the present study is that we were unable to account for the nested structure of organizations, teams, and leaders. Three prior studies that reported parallel effects of TFL on team and leader identification applied multi-level modeling techniques (Kark, Shamir, and Chen, 2003; Wang and Howell, 2012; Wu, Tsui, and Kinicki, 2010). We acknowledge that relationships at one level do not necessarily generalize to another level in an isomorphic way (Kozlowski and Klein, 2000). Further research is thus needed to investigate whether the presented model also holds for different levels of analysis and should attempt to integrate our results with the prior ones by testing a model in which (a) leader identification mediates TFL effects on collective identifications and (b) identifications with different foci differentially affect outcomes (potentially at different levels).

Furthermore, we were unable to test models that take interactions between the variables of interest into account, given that these relationships have not been empirically tested. For instance, one could argue that relational identifications are more likely to feed into collective identifications when leaders exhibit more TFL, perhaps especially with regard to the more group-focused TFL sub-dimensions (i.e. idealized influence and inspirational motivation). Even so, given that TFL is likely to be an antecedent of followers' identification, we believe that the current mediation model is a better fit than a moderation model. Nevertheless, testing these alternative models in future research could shed more light on the interrelations between TFL and identification foci.

Additionally, the meta-analytically calculated effect sizes were in some cases based on a small number of primary studies, which is not uncommon in MASEM, but increases the risk of method artifacts and publication bias affecting the overall results. Yet, the still substantial number of observations ( $N > 1,000$ ,  $k \geq 3$ ), the homogeneity of most small effect sizes, and the similar result patterns of overall TFL and its sub-dimensions make us confident that the limited number of studies available for some effects sizes do not hamper our findings.

Similarly, heterogeneity can be interpreted as a strength or limitation of our meta-analysis. On the one hand, heterogeneity indicates that our data capture a wide range of employee populations, which can also be seen from the study characteristics. That we still find a strong and robust model supports both the validity and generalizability of the presented findings. On the other hand, heterogeneity also signals that moderators might influence the effects sizes. In this regard, statistically controlling for significant moderators did not notably alter the resulting effects sizes. Thus, study characteristics are unlikely to be the most important source of the observed heterogeneity, and other moderators, such as inter-individual differences or context variables, might have an effect on the presented relationships. For instance, people differ in their general tendency to conceptualize themselves at the individual, interpersonal, or collective level (Cooper and Thatcher, 2010; Epitropaki, 2013). People who tend to conceptualize themselves more strongly at the interpersonal or collective level might be especially receptive to TFL's influences on these particular identifications, thus exhibiting stronger relationships between TFL and identifications (cf. Epitropaki and Martin, 2005). Context variables could also have a strong impact on organizational or team identification per se, thus limiting the potential of TFL to shape these collective identifications. A positive organizational image and organizational prestige, for instance, foster organizational identification (e.g. Bartels *et al.*, 2007), causing TFL to lose its potency to further influence identification directly. In sum, even though our robust model should hold across a wide variety of circumstances and work realities, potential moderators and boundary conditions warrant further investigation.

Finally, our results provide important empirical evidence of the social identity approach to leadership as our research explicitly focused on TFL's ability to shape followers' identifications. Yet, the social identity approach to leadership can be regarded as a meta-theory that is not limited to TFL. Future research should therefore explore whether similar effects occur for different sets of leader behavior. Scattered evidence of identification as a mediator of other leadership styles on outcomes (e.g. Sluss, Kilmchak, and Holmes, 2008; Van Quaquebeke and Eckloff, 2010) makes this a promising avenue for future research and calls for a systematic investigation of

leadership effects on identifications with different foci.

## Conclusion

Transformational leadership is proposed to transform followers' self-concepts and could thus constitute an important way to foster employee identification actively. Although primary research has supported a general positive association of TFL with identification, it has not systematically and simultaneously addressed identification with the leader, the team, and the organization. Shedding meta-analytic light on this complex interplay between TFL and identifications, we found that TFL (and each of its sub-dimensions) is more strongly associated with leader identification than with collective (i.e. organizational or team) identification. We offer a comprehensive model in which leader identification mediates TFL's effects on collective identifications. Thereby, our research highlights TFL as an important tool to shape followers' identifications and provides substantial evidence in support of the social identity approach to leadership. Furthermore, the results illustrate that TFL might influence outcomes through relational and/or collective identifications. With this model, we call for a systematic approach to the different foci of identification as different mechanisms of leadership effectiveness, and aim to stimulate more research on the complex interplay between leadership and identifications.

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## Supporting Information

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**Table S1.** Overview of studies included in the meta-analysis