Transformational and Transactional Leadership and Followers' Achievement Goals

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Abstract

Purpose Achievement goals, or the standards of competence employees pursue in their work, have far-reaching consequences for employee and organizational functioning. In the current research, we investigated whether employees' achievement goals can be predicted from their supervisor's leadership style.

Design/Methodology/Approach A multilevel study was conducted in which followers of 120 organizational leaders completed measures of their leader's transformational leadership (focusing on individual needs and abilities, on intellectual development, and on a common team mission), transactional leadership (focusing on monitoring and achievement-related rewards), and their own mastery goals (aimed at learning, developing, and mastering job-relevant skills), and performance goals (aimed at doing better than others).

Findings Group-level transformational leadership predicted followers' mastery goals, whereas group-level transactional leadership predicted followers' performance goals. Within-group differences in transformational leadership also predicted mastery goals.

Implications These findings suggest that leadership style plays an important role in the achievement goals followers adopt. Organizations may promote transactional leadership in contexts requiring that employees outperform others. In contrast, in contexts requiring learning and development, organizations may promote transformational leadership.

Originality/Value This research is the first to examine the relationships between leadership styles and specific follower goals, and the first to highlight the role of leadership as a social variable involved in employees' adoption of achievement goals.

Keywords Achievement goals · Goal orientation · Motivation · Leadership styles · Transformational leadership · Transactional leadership

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Introduction

The achievement goals employees adopt substantially affect organizational functioning as these goals shape employees' motivational experiences, their interpersonal behavior, and their performance attainment (e.g., Cellar et al. 2011; Elliot 2005; Hulleman et al. 2010; Payne et al. 2007; Van Yperen and Orehek 2013). Therefore, understanding which factors may relate to the adoption of different achievement goals may ultimately lead to insights that could be helpful in steering organizational processes. Notably, achievement goal pursuit in organizations does not occur in a social vacuum (cf., Conroy et al. 2009; Poortvliet and Darnon 2010); therefore, we propose that aspects of the social context in which employees operate are likely to relate to the specific goals they pursue. In the

current research we explored the relationship between leadership styles and followers' achievement goals. We suggest that the focus on leadership is particularly compelling from the perspective that leaders are considered to be crucial in the setting and pursuit of goals in organizations, and that they form an important part of employees' social environment in the organizational context (e.g., Bass 1990; Stogdill 1950; Bryman 1996; House 1971).

The Achievement Goal Approach

The achievement goal approach conceptualizes achievement goals as standards of competence toward which individuals aim, and which regulate their achievement activity. This approach delineates two ways in which individuals may define competence (Elliot 2005; Elliot and McGregor 2001). Individuals who endorse performance goals hold an interpersonal standard of competence; they define competence according to how well they perform in comparison with others. In contrast, individuals who endorse mastery goals hold a task-based or intrapersonal standard of competence; they define competence according to their task mastery or skill level (Elliot 2005). In the achievement goal literature, these goals are typically discussed as being directed toward desirable events; that is, as approach forms of self-regulation (Elliot 2005). Likewise, in the present research, performance goals are conceptualized as individuals' aims to do better than others, and mastery goals are conceptualized as individuals' aims to learn, develop, and master job-relevant skills. We focused exclusively on the approach variants of the achievement goals because these are predictive of the type of beneficial outcomes most relevant to organizations, while the avoidance goals are mostly predictive of detrimental outcomes (Bell and Kozlowski 2002; Church et al. 2001; Elliot and Church 1997; Vandewalle 2001; Van Yperen et al. 2009). Although we consistently use the terms "mastery" and "performance" goals, it should be noted that others have used different terms to denote overlapping concepts. For example, what are called mastery goals in the current research have also been named learning goals or task goals, and what are called performance goals in the current research have also been referred to as ego-involved goals, prove goals, or ability goals (see Ames 1992; Butler 1993; Middleton and Midgley 1997; Nicholls 1984; Vandewalle 1997).

The consequences and outcomes of achievement goals have been the topic of a large body of research and theorizing (e.g., Cellar et al. 2011; DeShon and Gillespie 2005; Elliot 2005; Hulleman et al. 2010; Payne et al. 2007; VandeWalle et al. 2001). For example, relative to performance goals, mastery goals are more likely to elicit positive affect, task enjoyment, and intrinsic motivation (Dweck 1999; Elliot 2005; Harackiewicz et al. 2002; Huang 2011; Van Yperen and Orehek 2013). In terms of

interpersonal behavior, pursuing mastery goals may lead individuals to behave more honestly, more cooperatively, and more constructively in interpersonal conflict, and to be less tactically deceptive (e.g., Darnon et al. 2006; Janssen and Van Yperen 2004; Poortvliet and Darnon 2010; Poortvliet et al. 2007). However, the view that mastery goals are the only optimal achievement regulator has been challenged by a quite consistent link between performance goals and performance attainment (e.g., Baranik et al. 2010; Cianci et al. 2010; Hulleman et al. 2010; Payne et al. 2007; Seijts and Crim 2009; Senko et al. 2011; Yeo et al. 2009). The focus on doing well relative to others is assumed to keep performance efforts channeled toward the interpersonal standards that eventuate in high levels of performance (Elliot and Church 1997; Harackiewicz et al. 2002; Lee et al. 2003; Van Yperen 2006). Therefore, insight into factors related to the adoption of these goals may have theoretical as well as practical surplus value.

Earlier researchers viewed the adoption of achievement goals mainly from a dispositional perspective (cf., Maehr and Nicholls 1980), arguing that achievement goals represented a predominant or prevailing tendency to focus on interpersonal or intrapersonal competence standards. Currently, many theorists subscribe to a more interactionist perspective in which goals are perceived as more situation-based cognitive structures (Button et al. 1996; DeShon and Gillespie 2005; Elliot 2005). Indeed, the self-regulatory nature of the goal-adoption process is considered to encompass situational adaptation and change in achievement goals (Fryer and Elliot 2007; Van Yperen et al. 2011). This perspective on achievement goals allows for a deeper understanding of the question of why individuals aim at a particular standard of competence in a given achievement situation.

So far, research into antecedents of situation-based achievement goals has been focused mainly on intra-individual characteristics, such as perceived competence and fear of failure (Elliot and Church 1997), achievement emotions (e.g., Daniels et al. 2009; Turner et al. 1998), and prior achievement (e.g., Van Yperen and Renkema 2008). Interpersonal variables have received less attention (Senko et al. 2011). Yet, given the social context in which employee behavior takes place, and given that interpersonal processes are ubiquitous in achievement activity (Conroy et al. 2009; Elliot and McGregor 2001; Janssen and Van Yperen 2004; Poortvliet and Darnon 2010), exploring the relationship between interpersonal variables and employee achievement goal pursuit may substantially enhance our knowledge of the adoption of distinct achievement goals in organizations. This knowledge, in turn, may provide suggestions for the management of achievement goals in organizations.

An interpersonal factor that is highly focal in organizations is leadership, and we propose that leadership styles

may be related to followers' achievement goals. Indeed, leadership is generally acknowledged to involve influencing followers' motivation and moving followers toward (collective) goal attainment (e.g., Bass 1990; Stogdill 1950; Bryman 1996; House 1971). Although this indicates that leadership may affect followers' motivation, the matter of how leadership may relate to followers' achievement goals has largely been neglected. Yet, knowledge of how leadership relates to followers' goal-relevant behavior is of interest because achievement goals are viewed as the proximal regulators of achievement-relevant behavior; as such, they represent the mid-level motivational constructs between motives and actual goal-related self-regulation (Elliot 2005; Elliot and Church 1997). Although not focused on leadership or conducted in a work context, a number of studies from different achievement domains may be relevant here. In initial investigations in the context of family relations, research by Elliot and McGregor (2001) indicated that parental practices (conditional approval and person-focused feedback) were related to children's performance goals in the classroom. Similarly, in sports contexts, findings have suggested that styles of coaching (e.g., autonomous vs. controlling) affect athletes' motives (e.g., Smith et al. 2010). These studies illustrate the potential significance of a socially central person in shaping other individuals' goals. Working from the notion that, in organizational contexts, leaders may be considered socially central individuals, we predicted that leaders' styles relate to employees' adoption of achievement goals.

This notion fits well within Dinh and Lord's (2012) recently articulated model of leadership perceptions and effectiveness. They summarized different theoretical approaches to leadership and suggest that there is significant addition of benefit in analyzing specific events or dynamic leader behaviors as they relate to effective leadership in addition to general, aggregate approaches. That is, a major proportion of variance in leadership outcomes can be attributed to leader personality and stable behavioral style (e.g., Kenny and Zaccaro 1983; Zaccaro et al. 1991). However, they also posit that a fuller understanding of leadership perceptions and effectiveness requires taking into account a potential flexibility or adaptiveness on the part of leaders in response to their (social) environmental demands. Furthermore, they suggest that effective leaders can adapt their behaviors to create new emergent states such as followers' goals. The current research nicely fits into this general theoretical framework by linking leaders' behavioral styles to followers' achievement goals.

Leadership Styles and Followers' Achievement Goals

In the leader-behavior paradigm (for a recent review and meta-analysis, see Derue et al. 2011), the behaviors that leaders exhibit in their attempts to influence followers are often classified in terms of leadership styles, which are collections of leader behaviors that are thought and have been shown to occur together systematically. Here, we focus on two styles that have figured prominently in the organizational literature: transformational and transactional leadership (Bass 1985; Bennis and Nanus 1985; Burns 1978; Conger and Kanungo 1987; House 1977, 1996; Kouzes and Posner 1987). We investigated these particular styles because, as we discuss next, they systematically differ in the competence-related encouragements they provide to followers.

Transformational leaders exert influence on their followers by communicating an idealistic vision of the future. Moreover, they recognize followers' individual needs and abilities and stimulate their intellectual development (Bass 1985; House 1977). In contrast, transactional leaders focus on the exchange relation between themselves and their followers and monitor deviation from agreed-upon normative standards (Bass 1985; House 1971, 1996). Thus, they make clear what individuals can expect in return for their compliance with certain performance criteria. We posit that these differences may be seen as directing followers toward distinct standards by which to define competence (cf., Bezuijen et al. 2009; Carmeli and Schaubroeck 2007).

First, transformational leaders are intellectually stimulating, directing followers to look at things from new perspectives, which may signify to followers that learning is central to competence (Hetland et al. 2011). For example, when followers are actively stimulated to look at their work from a novel perspective, it focuses their attention on the task itself, how they are progressing in the task, and their learning process and individual development. Transformational leaders treat followers as individuals with their own needs and abilities (Bass 1985), and tend to focus followers' attention on improving their own skills rather than comparing themselves with others. Furthermore, transformational leaders create a collective vision (Barbuto 1997), stressing the importance of what is shared among team members instead of emphasizing inter-individual contrasts. For example, when a leader makes followers aware of centrally important shared values, this may motivate followers to put effort into excelling in their own tasks for the good of the team (Sosik and Dionne 1997). Accordingly, *Hypothesis 1* was that transformational leadership would be positively related to followers' endorsement of mastery goals.

In contrast, transactional leaders specify that rewards are contingent on achievements, which may make individual task performance salient and thereby set followers apart from one another in terms of their achievements (Lord et al. 1999). Hence, transactional leadership, emphasizing individual as opposed to collective goals, tends to reduce

cooperation within teams (Kahai et al. 2003). Furthermore, the stressing of rewards by transactional leaders typically signals scarcity of resources or negative interdependence (Deutsch 1949), creating an evaluative context that implies that followers need to demonstrate their competence by outperforming others to receive contingent rewards (Bolino et al. 2002; Cabrera and Cabrera 2005). That is, when individual followers are aware that their performance will be evaluated, they are more likely to socially compare and aim at normative, interpersonal standards (Baron and Cook 1992; Sarin and Mahajan 2001; Zenger 1992). Hence, *Hypothesis 2* was that transactional leadership would be positively related to followers' endorsement of performance goals.

Method

Participants

The participants were 449 (59.4 % female) followers of 120 leaders from diverse organizations in the Netherlands. Two to seven followers' ratings were obtained for each leader ($M = 3.74, SD = 0.78$). Participants' age ranged from 17 to 62 ($M = 33.75, SD = 11.63$). Tenure ranged from 1 to 39 years ($M = 6.43, SD = 8.07$) and participants reported working between 8 and 80 h per week ($M = 28.11, SD = 11.05$). Most of the participants worked in retail and distribution (22.5 %), health care (20.0 %), education (19.6 %), or finance (13.9 %). The remaining 24.0 % of participants worked in diverse fields including informational technology, government, and the food service industry.

Procedure

Participants were approached at their place of employment and asked to participate in a voluntary survey about job characteristics. As leadership is considered to be pre-eminently a group-process (Chemers 2001), we used reports from two or more followers from each leader to assess the leadership style of their leader (LeBreton and Senter 2008). Data were collected by research assistants who approached supervisors for permission to hand out paper-and-pencil questionnaires to their followers. The research assistants then asked followers to complete the survey either on the spot (and hand it back to the research assistant right away) or at home (and hand it back to the research assistant at a later, specified time). Research assistants were instructed to aim at obtaining ratings from four followers for each leader, to be able to benefit from intersubjectively reliable leadership ratings. Only once, a leader did explicitly not want their followers to participate. Participants were assured that the survey was anonymous and that their supervisor would not be able to view their responses. Participants completed questionnaires about their supervisor's leadership style and their own achievement goals in the work-context.

Measures

Transformational and transactional leadership were assessed using the Dutch version of the multifactor leadership questionnaire (MLQ; Den Hartog et al. 1997; see also Bass and Avolio 1995). All items were completed on a scale ranging from 1 (*not at all*) to 5 (*frequently*). Transformational leadership ($M = 3.58, SD = 0.72; \alpha = .95$) was assessed using 20 items, such as, "*My supervisor shows me how to look at problems from new angles.*" Transactional leadership ($M = 2.94, SD = 0.47; \alpha = .64$) was assessed using 12 items, such as, "*My supervisor tells me what to do to be rewarded for my efforts.*"

Achievement goals were assessed using the approach goal subscales of the achievement goal questionnaire-revised (AGQ-R; Elliot and Murayama 2008) adapted to the job context. Again, we note that we focused on approach goals because of their applicability to organizational practices (cf., Janssen and Van Yperen 2004). Items were completed on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Performance goals ($M = 3.77, SD = .86; \alpha = .83$) were assessed using three items, such as, "*In my job, I am striving to do well compared to others.*" Mastery goals ($M = 4.34, SD = .63; \alpha = .78$) were assessed using three items, such as, "*In my job, my aim is to completely master my tasks.*" The adaptation to the job context was achieved by altering the first part of each item, which reflects the context of the goal. For example, in the original scale (Elliot and Murayama 2008), the mastery example item reads: "*In this class, my aim is to completely master my tasks.*"

Results

Preliminary Analyses

With regard to common method variance (Conway and Lance 2010; Podsakoff et al. 2003), it is important to demonstrate first that the variables (both independent and dependent) are not only theoretically, but also empirically distinct. For example, if a single, method-related factor would be responsible for a potential relation between leadership styles and achievement goals, we would expect confirmatory factor analyses to favor models in which the leadership style and the goal we expected it to predict were combined. Therefore, we performed a series of confirmatory factor analyses to investigate the distinctiveness of the

study variables (Anderson and Gerbing 1988; Joreskog 1993).

The results did not provide evidence for common method bias. That is, the assumed four-factor model (distinguishing transformational leadership, transactional leadership, mastery goals, and performance goals) provided a better fit to the data than any other model, including a model in which the two leadership styles were combined and the two achievement goals were combined, $\Delta\chi^2$ $(5) = 679.24$ $p < .001$, and a model in which the two leadership styles were combined but the two achievement goals were modeled as separate factors, $\Delta\chi^2$ $(3) = 348.15$ $p < .001$. The four-factor model was also superior to a one-factor model that combined all four variables into one factor, $\Delta\chi^2$ $(6) = 1247.22$ $p < .001$, and a two-factor model that combined transformational leadership and mastery goals into one factor and combined transactional leadership and performance goals into another factor, $\Delta\chi^2$ $(5) = 872.86$, $p < .001$.

Analytic Strategy

Subordinates were nested within leaders, i.e., subordinates' leadership style assessments are not independent, which violates the assumption of independence of multiple regression analysis. Therefore, we conducted multilevel analyses (Bryk and Raudenbush 1992; Snijders and Bosker 1999) to test our hypotheses. We distinguished between-group relationships (modeled by group means of leadership-style assessment, centered around the grand mean) and within-group relationships (modeled by the within-group deviation: individual scores centered around the group mean, i.e., the individual assessment of leadership style minus the group mean; cf., Bryk and Raudenbush 1992; Snijders and Bosker 1999). Our model incorporated a random (group-level) intercept; the leadership style variables (both between and within) were modeled as fixed effects. Figure 1 provides the general expression of both estimated models, which also includes demographic variables and expression of how the different variables were centered.

Employing multilevel modeling has several advantages. First, using shared perceptions of followers is generally considered to be an adequate method to reliably assess leaders' styles as it creates intersubjectivity relative to using individual followers' reports on their leaders' styles, or using leaders' ratings of their own leadership styles (cf., Frese and Zapf 1988; LeBreton and Senter 2008). Second, distinguishing between relationships at different levels (between-group and within-group) controls for differences between followers of the same leader as well as idiosyncratic perceptions of, and individual treatment by, leaders. Third, this technique allows for a clear estimation of
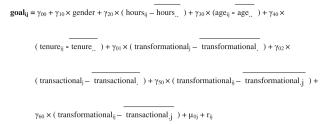
$$\text{goal}_{ij} = \gamma_{00} + \gamma_{10} \times \text{gender} + \gamma_{20} \times (\text{hours}_{ij} - \overline{\text{hours}_{..}}) + \gamma_{30} \times (\text{age}_{ij} - \overline{\text{age}_{..}}) + \gamma_{40} \times$$
$$(\text{tenure}_{ij} - \overline{\text{tenure}_{..}}) + \gamma_{01} \times (\text{transformational}_j - \overline{\text{transformational}_{.}}) + \gamma_{02} \times$$
$$(\text{transactional}_j - \overline{\text{transactional}_{.}}) + \gamma_{50} \times (\text{transformational}_{ij} - \overline{\text{transformational}_{.j}}) +$$
$$\gamma_{60} \times (\text{transformational}_{ij} - \overline{\text{transactional}_{.j}}) + \mu_{0j} + r_{ij}$$

Fig. 1 Model expression for the multilevel analysis of achievement goals using demographic control variables and between-group and within-group transformational and transactional leadership styles. The models for performance and mastery goals are expressed identically except that the dependent variables differ

variance explained in achievement goals by both between and within-group differences in leadership styles.

Aggregation

Means, standard deviations, alphas, and zero-order correlations of all variables for individual scores and group averages used in subsequent analyses are presented in Table 1. To assess whether aggregation of leadership styles to the group-level was justified, we first explored the extent to which between-group variance was present in leadership styles. One-way analyses of variance showed significant between-group variance for transformational leadership, $F(119,329) = 4.67$, $p < .001$, $\eta^2 = .63$, and transactional leadership, $F(119,329) = 2.72$, $p < .001$, $\eta^2 = .50$. Further, the percentage of between-group variation, ICC(1), was .50 for transformational and .32 for transactional leadership; both are high compared with what is generally found in applied settings (cf., Bliese 2000). Within-group reliability of the mean, ICC(2), was .79 for transformational and .63 for transactional leadership, and R_{wg} were .87 and .92, respectively, indicating acceptable reliability of the group means (cf., Bliese 2000; LeBreton and Senter 2008). Thus, between-group variance and within-group agreement justify aggregation of leadership styles from the individual level to the group level.

Table 1 Means, standard deviations, alphas, and zero-order correlations

Variable	Mean	SD	1	2	3	4
1 Transformational	3.58	.72	**.95**	.34	.31	.18
2 Transactional	2.94	.47	.33	**.64**	.03	.26
3 Mastery	4.34	.63	.22	.06	**.78**	.20
4 Performance	3.77	.86	.15	.12	.27	**.83**

Individual-level correlations are presented below diagonal (where rs > .11, $p < .05$ and rs > .15, $p < .005$. Leader-level correlations (based on average ratings from all followers of the same leader) are presented above diagonal (where rs > .17, $p < .05$ and rs > .25, $p < .005$). $N = 449$ followers, 120 leaders. Reliability coefficients alpha are presented in bold on the diagonal

Given that we tested the relations of the leadership styles to achievement goals at between-group and within-group levels, we would also expect a significant proportion of between-group variance in mastery and performance goals. Indeed, one-way analyses of variance showed significant between-group variance for mastery goals, $F(119,329) = 2.01$, $p < .001$, $\eta^2 = .42$, and for performance goals, $F(119,329) = 1.57$, $p = .001$, $\eta^2 = .36$. The percentage of between-group variation, ICC(1), was .21 for mastery goals and .13 for performance goals. Within-group reliability of the mean, ICC(2), was .50 for mastery goals and .36 for performance goals, and R_{wg} were .84 and .68, respectively. Although considerable, these percentages were notably lower than those for leadership styles, supporting the analysis of both between-group and within-group relationships.

Hypothesis Testing

First, we tested the hypothesis that transformational leadership is positively related to followers' endorsement of mastery goals (*Hypothesis 1*). We first examined a model in which demographic variables were entered as individual-level predictors of mastery goals. As shown in Table 2, this analysis revealed a significant positive relation between the number of contracted hours per week and mastery goals, $\gamma_{20} = 0.01$, $t(444) = 2.06$, $p = .04$. Also, the analysis showed a significant relation between gender and mastery goals, $\gamma_{10} = -0.30$, $t(444) = -4.36$, $p < .001$, indicating that women ($M = 4.45$, $SD = 0.54$) reported stronger mastery goals than men ($M = 4.17$, $SD = 0.72$). Next, we entered the group-level variables and the within-group

deviance variables for transformational and transactional leadership. In line with our expectation, the findings revealed significant positive relations between transformational leadership and followers' mastery goals both between groups, $\gamma_{01} = 0.23$, $t(117) = 2.56$, $p = .01$, and within groups, $\gamma_{50} = .15$, $t(440) = 2.15$, $p = .03$. Transactional leadership was not related to followers' mastery goals, neither between, $\gamma_{02} = -0.03$, $t(117) = -0.31$, $p = .76$, nor within groups, $\gamma_{60} = .04$, $t(440) = 0.52$, $p = .60$. Leadership styles explained 12.7 % of the variance between groups. That is, the unexplained variance associated with the intercept, the second level, was reduced by 12.7 % when the group-level leadership variables were added to the model. In addition, 2.2 % of the variance in mastery goals within groups was explained by within-group differences in leadership styles. These percentages are based on the unique variance, after demographic variables were controlled for.

Second, we tested the hypothesis that transactional leadership is positively related to followers' endorsement of performance goals (*Hypothesis 2*); this was done following the same analytic procedure as was followed in testing the first hypothesis. In the first step, no significant relations were observed between any of the demographic control variables and performance goals, $ts < 1.23$, $ps > .22$. In the next step, we entered the group-level variables and the within-group deviance variables for transformational and transactional leadership. This revealed a significant positive relation between transactional leadership and followers' performance goals between groups: $\gamma_{02} = 0.37$, $t(117) = 3.04$, $p = .003$, but not within groups: $\gamma_{60} = -0.09$, $t(440) = -0.82$, $p = .42$. Transformational leadership was not related to followers' performance goals, neither between,

Table 2 Summary of multilevel analyses with demographic control variables (Step 1) and between-group and within-group transformational (TFL) and transactional (TAL) leadership styles (Step 2) as predictors of mastery and performance goals

	Mastery goals				Performance goals			
	Step 1		Step 2		Step 1		Step 2	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Step 1								
Age	−0.00	0.00	−0.00	0.00	−0.01	0.01	−0.00	0.01
Gender	−0.30**	0.07	−0.28*	0.07	−0.11	0.09	−0.11	0.09
Tenure	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01
Hours	0.01*	0.00	0.01*	0.00	−0.00	0.00	−0.00	0.00
Step 2								
TFL (group)			.23*	.09			.11	.08
TAL (group)			−.03	.10			.37**	.12
TFL (wgd)			.15*	.07			.16	.10
TAL (wgd)			.04	.08			−.09	.11

wgd within-group deviation

* $p < .05$; ** $p < .01$

$\gamma_{01} = 0.11$, $t(117) = 1.37$, $p = .17$, nor within groups, $\gamma_{50} = 0.16$, $t(440) = 1.59$, $p = .11$ (see Table 2). Comparison of the variance associated with the intercept in the model including leadership styles with the variance associated with the intercept in the model excluding leadership styles showed that leadership explained 19.6 % of the unique variance in performance goals between groups after controlling for demographic variables.

The analyses reported in Table 2 include demographic control variables. These particular variables were routinely collected to provide a clear picture of sample characteristics in this study. As these variables are sometimes reported to be associated with achievement goals (Hulleman et al. 2010), we included them in the analysis reported above. Note that, although we did find that both the number of hours participants worked per week and participants' gender predicted mastery goals, these variables did not affect the relationships between leadership styles and achievement goals. Specifically, in models without controls, significant positive relations were found between transformational leadership and followers' mastery goals both between groups, $\gamma_{01} = .25$, $t(117) = 3.55$, $p = .001$, and within groups, $\gamma_{50} = .15$, $t(444) = 2.46$, $p = .015$. Transactional leadership was not related to followers' mastery goals, neither between, $\gamma_{02} = -.11$, $t(117) = -.93$, $p > .05$, nor within groups, $\gamma_{60} = .07$, $t(444) = .86$, $p > .05$. For performance goals, a significant positive relation between transactional leadership and followers' performance goals was observed between groups, $\gamma_{02} = .38$, $t(117) = 2.62$, $p = .01$, but not within groups, $\gamma_{60} = -.09$, $t(444) = -.74$, $p > .05$. Transformational leadership was not related to followers' performance goals, neither between, $\gamma_{01} = .12$, $t(117) = 1.35$, $p > .05$, nor within groups, $\gamma_{50} = .16$, $t(444) = 1.84$, $p > .05$.

In addition, as mastery goals and performance goals also showed a relatively strong between-leader component, it may be argued that our hypotheses should be tested only at the group level. When only the aggregated group scores were analyzed in a standard multiple regression analysis, the same pattern of significant relations emerged. Transformational leadership was positively related to mastery goals, $\beta = .34$, $t(117) = 3.67$, $p < .001$, while transactional leadership was not related to mastery goals, $\beta = -.09$, $t(117) = -0.92$, $p = .36$. In contrast, transactional leadership was positively related to performance goals, $\beta = .22$, $t(117) = 2.37$, $p = .02$, while transformational was not related to performance goals, $\beta = .11$, $t(117) = 1.13$, $p = .26$ (see also Table 2).

Finally, some have argued that in classic multilevel analysis an analytical issue is that the individual is included in calculation of the group mean, leading to recursiveness or non-independence problems (Kenny et al. 2002). Indeed, the relations we observed between leadership styles and achievement goals are in part based on ratings from a common source (because the individual is included in the group mean), although aggregating to the group level might be seen as partly dealing with individual response biases (Bono and Judge 2003). Important to note is that ratings on several variables collected from the same source can give rise to issues of common method variance, while a way to remedy this is to somehow separate these variables (see Conway and Lance 2010; Podsakoff et al. 2003). A way to combat these issue is by separating variables is to employ a group version of actor–partner interdependence modeling (GAPIM; Kenny and Garcia 2010a, b). In this type of modeling, the group score used to predict an individual outcome variable is based on the mean of the predictor variables of the rest of the group, called *others*. In this case, the individual's mastery and performance goal is predicted by the leadership styles as assessed by their colleagues who were supervised by the same leader. That is, by calculating a mean score of both leadership styles for each individual separately without including that particular individual in the calculation of the average, the observed relationship is not directly influenced by the individual responding to both the independent and the dependent variable using the same method.

Testing our hypotheses this way, revealed the same results as through our analyses presented above. Transformational leadership as assessed by other followers of the same leader was positively related to the individual's endorsement of a mastery goal, $\gamma_{10} = .16$, $t(446) = 1.99$, $p = .047$, while transactional leadership was not related to mastery goals, $\gamma_{20} = -.13$, $t(446) = -1.35$, $p = .18$. In contrast, transactional leadership as assessed by other followers of the same leader was positively related to the individual's endorsement of a performance goal, $\gamma_{20} = .36$, $t(446) = 3.23$, $p = .002$, while transformational leadership was not related to performance goals, $\gamma_{10} = .07$, $t(446) = 0.84$, $p = .40$. Again, these relationships held both when controlling for demographic variables and when not including demographic variables, ps $< .05$.

General Discussion

In line with our hypotheses, the findings of this study revealed that transformational leadership was positively related to followers' endorsement of mastery goals, while transactional leadership was positively related to followers' endorsement of performance goals. Between-groups differences in leadership styles were the most consistent predictors of achievement goal endorsement. Also, within-group differences in transformational leadership were positively related to differences in followers' mastery goal endorsement within groups of followers with the same

leader. Accordingly, these findings highlight the importance of leadership style in relation to followers' achievement goal pursuit.

Although the achievement goal approach conceptualizes goals as context-specific aims (Elliot 2005), and achievement goals can be successfully activated situationally (e.g., Seijts and Crim 2009), empirical knowledge on relevant characteristics related to individuals' adoption of goals in specific situations has remained relatively limited (e.g., Boekaerts and Corno 2005; Church et al. 2001; Elliot and McGregor 2001; Papaioannou et al. 2007; Van Yperen et al. 2011). Given that most of achievement-striving occurs in a social context, the current findings highlight a prominent factor in achievement goal endorsement in the workplace: leadership style. It should be noted that others have suggested (Dragoni 2005) and found (Church et al. 2001) that a social factor involved in achievement goal endorsement may be the motivational climate in a work setting, classroom, or sports team. Indeed, it seems likely that individuals enacting central social roles in a particular context, such as leaders, teachers, and coaches, play an important role in shaping such climates (cf., Dragoni 2005). The current research deviates from and adds to this perspective by linking followers' achievement goal endorsement to their shared perceptions of their leaders' styles. Furthermore, this study adds to an emerging field interested in the inherently social nature of achievement activity (see Conroy et al. 2009; Janssen and Van Yperen 2004; Poortvliet and Darnon 2010). More specifically, while the consequences of achievement goals for social functioning have recently started to garner research interest, to our knowledge, this is the first study in which shared perceptions of others' behavior were examined as a social factor associated with individuals' achievement goal endorsement.

The within-groups relation between transformational leadership and followers' mastery goals is an interesting finding because it suggests that transformational leaders, beyond general encouragement of learning and development, also encourage this in some subordinates more than in others. In line with the notion that transactional leaders do not view followers as individuals as much as transformational leaders do (Bass 1985), the lack of a within-group relation between transactional leadership and followers' performance goals suggests that this leadership style (or perceptions of it) may fluctuate less between individual followers of the same leader.

The present research contributes to the leadership literature by showing that transformational and transactional leadership styles relate differentially to followers' achievement goals. Although the influence of leadership on motivation and self-regulation is at the core of the leadership process (e.g., Bass 1990; Stogdill 1950; Bryman 1996;

House 1971), research has largely neglected the question of how leadership may relate to followers' specific goals and aims. Our findings indicate that followers' shared perceptions as well as their individual perceptions of transformational leadership were associated with followers applying intrapersonal standards of competence to their achievement-striving at work (i.e., with their endorsement of mastery goals). In contrast, followers' shared perceptions of transactional leadership were associated with followers applying interpersonal standards of competence in their achievement-striving at work (i.e., with their endorsement of performance goals). Thus, this research complements and supports recent models in the leadership literature (e.g., Dinh and Lord 2012) that have posited that leadership effectiveness may hinge on leaders' ability to create emergent states such as followers' goal orientation. That is, leaders who are able to adaptively and dynamically exhibit transformational and transactional leadership may be able to instill both types of goals when it is most adaptive to organizational performance.

The achievement goal approach views achievement goals as proximal regulators of competence-relevant behavior and self-regulation (Elliot 2005; Elliot and Church 1997). Therefore, the current findings may also have implications for understanding the relationship between leadership and followers' behavior. That is, achievement goals may function as the proximal regulator of achievement-relevant behavior stemming from leaders' influence. Previous findings that support this reasoning include the finding that the positive psychological consequences of transformational leadership (see Judge and Piccolo 2004) seem to be analogous to those associated with mastery goals in the work context (Cellar et al. 2011; Payne et al. 2007; Janssen and Van Yperen 2004). Similarly, both transactional leadership and performance goals seem to be positively linked to actual performance attainment in specific situations (e.g., Hulleman et al. 2010; Judge and Piccolo 2004; Kahai et al. 2003; Seijts and Crim 2009; Yeo et al. 2009). Hence, future research may extend the conclusions of this research by incorporating the outcomes associated with both leadership styles and achievement goals to investigate whether the follower-level outcomes of leadership styles may in part be due to their relation to followers' achievement goals.

We suggested that the transformational and transactional styles that leaders are perceived to exhibit may trigger in followers an intrapersonal (mastery goal) or an interpersonal (performance goal) definition of competence, respectively. In line with these findings, Bono and Judge (2003) showed that transformational leadership enhances followers' sense of self-concordance (i.e., the extent to which activities are construed as expressing individuals' authentic values and interests). Both mastery goals and self-concordant goals, on the surface, seem to involve motivational force coming more from within the individual (rather than from external

sources). As such, some may suggest that transformational leadership relates to followers' mastery goals because it makes followers construe any goal they have in terms of intrapersonal motivations (i.e., in terms of learning and development, and in intrinsic terms). However, the achievement goal approach construes achievement goals as aims or standards that are separate from reasons or motives (Elliot 2005; Elliot and Church 1997). That is, individuals can adopt either type of achievement standard based on the same reason or motive, and a reason or motive can, for example, prompt different goals at different times (see also Elliot and Fryer 2008). The finding that transformational leadership makes followers perceive their behavior as more intrinsically motivated (Bono and Judge 2003), in this sense, need not say much about the links we discovered here. Indeed, given that the current research and the studies by Bono and Judge (2003) are among the only ones in which the link between leadership and specific aspects of follower motivation was examined, we are eager to see future research in this area.

In a theoretical review, Kark and Van Dijk (2007) have suggested that transformational leadership might lead followers to adopt a promotion regulatory focus, and that transactional leadership might lead followers to adopt a prevention regulatory focus. Understanding how those theoretical propositions relate to the current hypotheses and our results requires delving deeper into fundamental processes of self-regulation. Achievement goal setting occurs in the goal initiation phase; regulatory foci describe how individuals strive for their goals, their strategic tendencies. As such, regulatory foci describe the goal operation phase of the self-regulation process (cf., Finkel and Fitzsimons 2011). That is, regulatory foci describe the process by which individuals reduce discrepancy and the manner in which they prefer to carry out the discrepancy reduction process, whereas achievement goals delineate standards, the discrepancy which individuals aim to reduce, the specific aim toward which they decide to regulate. Thus, the current findings neither contradict nor support the theoretical propositions made by Kark and Van Dijk (2007), but instead stand on their own and address previously unconsidered possibilities for the way in which transformational and transactional leadership relate to follower self-regulation. This difference once again indicates that future research into the complex involvement of leader behavior within and across different phases of follower self-regulation would be highly valuable.

In a different field of interest, research findings have suggested that social relationships can shape the ability to self-regulate or to practice self-control (Baumeister et al. 2005; Finkel et al. 2006). Further, people may hold goals for the sake of a relationship, and goals can be activated by the mental or physical presence of relationship partners (Fitzsimons and Bargh 2003; Shah 2003). The current findings go beyond this in elucidating how others' behaviors may relate to specific and different ways in which individuals direct their competence-relevant self-regulatory activity.

Managerial Implications

The present findings imply that transformational leadership can be instrumental in promoting followers' adoption of mastery goals, whereas transactional leadership can be instrumental in promoting followers' adoption of performance goals. Previous research findings suggest that both goals may be considered to be adaptive contingent on the context (e.g., Darnon et al. 2009). Thus, organizations may promote transactional leadership in contexts requiring that individuals outperform others. In contrast, in contexts requiring learning or development, organizations may promote transformational leadership. Important to note in this regard is that other research has indicated that these styles of leadership can be learned through particular training programs (Barling et al. 1996; Dvir et al. 2002), which suggests a direct way to facilitate the endorsement of mastery goals versus performance goals in organizational settings (i.e., through the directed training and development of leadership styles).

Strengths and Limitations

This study has a number of additional characteristics that require mention. First, the design of our study was cross-sectional. Thus, it should be noted that the methodology we used does not permit causal inferences about the link between leaders' styles and followers' achievement goals. However, our theoretical reasoning was that leadership style is likely to impact achievement goal endorsement rather than the reverse, because leadership is thought to affect follower motivation and behavior (Bass 1990; Stogdill 1950; Bryman 1996; House 1971) and because achievement goals have been conceptualized as situational constructs that are affected by cues in the environment (Elliot 2005). Although it remains possible that followers' achievement goals affect their perceptions of leadership styles, it seems less likely that followers' achievement goals influence *shared* perceptions of leadership styles. On the other hand, followers with specific goals might apply for jobs with leaders who exhibit a certain style (Schneider 1987), although this would imply that individuals are able to recognize the style of a leader straightaway in the job application process and that they know exactly by whom they will be supervised when applying for a job. Although this seems unlikely, replication of our findings using experimental designs is necessary to determine causality.

Second, leadership styles and achievement goals were assessed using subjective ratings. As both mastery goals (see Darnon et al. 2009) and transformational leadership (Bass 1985) seem to be more socially desirable characteristics, one may consider the possibility that the within-group differences in ratings stem from a response bias. However, this would require assuming that this desirability does not apply to transactional leadership and performance goals, otherwise a within-group relation should also have been observed there. In addition, if social desirability did occur in the ratings of transformational leadership and mastery goals, and led to restriction of range in these variables, it is more likely to lead to an underestimation of the size of this relationship.

Another potential concern relating to the measurement of variables is that the transactional leadership measure achieved relatively low scale reliability (albeit comparable to reported reliability in other studies using this measure; Den Hartog et al. 1997). Although it may be noted that Cronbach's alpha represents the lowest estimate of actual reliability (Cortina 1993), low scale reliability implies measurement error, which can enhance variance in the estimation of the effect size. Particularly, it tends to lower correlation estimates (Schmitt 1996; Lord and Novick 1968), and accordingly, the relatively low reliability of the scale cannot explain our results. Rather, the observed strength of the relationship between transactional leadership and followers' performance goals may be an underestimation of the actual strength.

More generally, the issue of potential common method bias should be discussed. Conway and Lance (2010) provided four broad recommendations regarding common method bias. First, there may be important reasons to use a common method or source and an argument should be provided for this. Particularly, and also in our case, when concepts revolve around private events or characteristics that can only be assessed by individuals themselves, a self-report measure is likely to be most useful. This is in part the case with both our sets of variables since followers are those individuals in the best position to rate their leader's styles (Judge and Piccolo 2004), and because goals are psychological concepts internal to the individual.

Second, evidence of the validity of the constructs under study is important. In this case, we used validated measures which have been widely applied in previous research. For example, primary research and meta-analyses (Elliot and Church 1997; Elliot and McGregor 2001; Elliot and Murayama 2008; Hulleman et al. 2010; Judge and Piccolo 2004; Lowe et al. 1996) indicate that the measures we used relate to distinct sets of outcome variables, providing evidence for the nomological network.

Third, items of separate concepts should not overlap in their content. As the measures of achievement goals ask about the aim or standard an individual pursues, and the measures of leadership styles inquire about the behavior of the leader without explicit reference to aims or standards, the question of overlap does not seem to be an issue with the measurement of the concepts in this study. Indeed, the comparison of the different factor models in our study indicate that the concepts are not only theoretically, but also empirically distinguishable.

Fourth, Conway and Lance (2010) suggested that proactive steps should be taken to mitigate the threats of common method effects. In this case, studying multiple followers of the same leader allowed us to aggregate leadership styles to the group level which reduces common source bias because, as Bono and Judge (2003) argued, individual response differences and biases are treated as errors when individual ratings are aggregated (Bono and Judge 2003; see also Carson et al. 2007; Walumbwa et al. 2011). Indeed, because this methodology creates an intersubjective assessment, this is the most common method used to reliably assess leadership styles (cf., LeBreton and Senter 2008). Moreover, we provided an additional analysis in which the individual's achievement goal was predicted by the assessment of leadership styles based on the other followers of the same leader (i.e., while not including the individual in question in the calculation of the leadership style averages). Although we acknowledge that, in designing the study, we could have considered asking leaders to rate their own leadership style, followers are the ones observing their leaders' behavior most frequently and are therefore in a good position to rate this behavior (Judge and Piccolo 2004). In addition, leaders' own reports of their behavior are, relative to followers', more likely to be biased by social desirability and self-presentation concerns.

Finally, leadership is perhaps one of the most salient and intuitive variables to be investigated in relation to followers' endorsement of achievement goals, but it is certainly not the only one. Other social factors in the organizational context, such as characteristics of colleagues or team members, may also play a role in achievement goal-adoption. We hope that this research will spark interest in both the more precise relations between these social factors and individuals' motivation.

Concluding Remarks

Using different levels of analysis, our results showed that between-group differences in leadership style were the strongest predictors of followers' achievement goal endorsement. Specifically, leaders looking to promote mastery goals among their followers may do so through the active application of a transformational leadership style, while those looking to promote performance goals

may do so through the active application of a transactional leadership style.

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