

Uncovering the Underlying Relationship Between Transformational Leaders and Followers' Task Performance

Kimberley Breevaart,¹ Arnold B. Bakker,¹ Evangelia Demerouti,²
Dominique M. Sleebos,^{1,*} and Véronique Maduro^{1,*}

¹Department of Work and Organizational Psychology, Erasmus University Rotterdam, The Netherlands, ²Department of Industrial Engineering and Innovation Sciences Human Performance Management Group, Eindhoven University of Technology, The Netherlands

Abstract. The purpose of the present study was to unravel the mechanisms underlying the relationship between transformational leadership, follower work engagement, and follower job performance and to investigate a possible boundary condition of transformational leadership. We used structural equation modeling to test our model among 162 dyads consisting of one employee and their leader, who both filled out an online questionnaire. Followers reported more job resources and need fulfillment when their leader showed more transformational leadership behavior, and this contributed to followers' engagement and job performance. Consistent with our hypothesis, transformational leaders mainly fulfilled followers' needs when followers were high in need for leadership.

Keywords: employee engagement, job resources, need for leadership, transformational leadership

Transformational leaders are effective leaders who influence their followers' job attitudes and behaviors in a positive way (e.g., Judge & Piccolo, 2004). Research attention on the mediating mechanisms of transformational leadership is increasing and although some of these processes seem promising, it is still not well understood how transformational leaders exert their influence on favorable follower outcomes. Several studies propose that transformational leaders are effective, because they influence job characteristics (e.g., Nielsen, Randall, Yarker, & Brenner, 2008; Piccolo & Colquitt, 2006) or fulfill followers' basic needs (e.g., Kovjanic, Schuh, & Jonas, 2013; Kovjanic, Schuh, Jonas, Van Quaquebeke, & Van Dick, 2012).

The present study extends the above-mentioned studies by providing a more integrated effort to understand the underlying mechanisms of transformational leadership by proposing a sequentially mediating mechanism through which transformational leaders influence their followers' task performance. We argue that transformational leaders optimize followers' work environment, which satisfies followers' basic needs, increases employee engagement, and consequently increases employees' task performance.

Hence, the current study focuses on outcomes that are beneficial to both the employee (work engagement) and the organization (job performance). Finally, we focus on need for leadership as a possible boundary condition of transformational leadership to examine whether some followers benefit more from transformational leadership than others. Hereby we acknowledge that followers are actively involved in the effectiveness of leadership behaviors.

Transformational Leadership

Transformational leaders motivate their followers to transcend their self-interest in favor of the interests of the group, are sensitive to the needs of their followers, and stimulate high performance by increasing the intrinsic value of work and showing confidence in their followers' abilities (Avolio & Yammarino, 2002). Bass (1985) argued that transformational leadership consists of four related components. The first component, idealized influence, means that leaders move their followers' focus from their individual

* The last two co-authors contributed equally to this manuscript.

needs to the common good. Second, inspirational motivation refers to the leaders' ability to inspire their followers with an attractive vision of the future. Third, intellectual stimulation means that leaders challenge their followers to look at their problems from different angles and to come up with new ideas, even if these ideas are different from the leaders' own ideas. Finally, leaders showing individual consideration take into account the unique needs and abilities of their followers.

Transformational leaders are valuable to organizations because as meta-analytical studies have shown, transformational leadership is associated with leader effectiveness and follower satisfaction with their leader (Fuller, Patterson, Hester, & Stringer, 1996; Judge & Piccolo, 2004). Furthermore, and probably most importantly in the current economy, transformational leaders are able to enhance their followers' in-role and extra-role performance (Lowe, Kroeck, & Sivasubramaniam, 1996).

Job Resources

According to Smircich and Morgan's (1982) management of meaning perspective, leaders are an important part of the social environment and therefore have a profound influence on the reality in which employees work. In line with this perspective, leaders may provide meaning to the work followers perform because of their influence on the work environment. Besides, Salancik and Pfeffer (1978) state that individuals use information from their social environment when making judgments about their work environment. As part of that social environment, leaders are an influential source of information when judging one's work environment.

Furthermore, specific transformational leadership behaviors may stimulate the availability of job resources. For example, fostering a shared group identity and emphasizing the collective good may improve interpersonal relationships among followers and thereby contribute to social support followers receive from one another. Moreover, followers are likely to feel supported by their leader and have more autonomy to perform their job when their leader pays attention to their needs.

Finally, transformational leaders delegate tasks according to followers' needs and abilities (intellectual stimulation), meaning that they provide each follower with challenging, but feasible tasks, thereby stimulating their followers' growth and development. Research has shown that transformational leaders positively influence the work environment using cross-sectional and longitudinal designs (Nielsen et al., 2008; Piccolo & Colquitt, 2006). The contribution of the present study does not lie in the examination of the relationship between transformational leadership and follower perception of job resources per se, but rather in exploring a new, sequentially mediated model, to explain the effectiveness of transformational leadership. Our first hypothesis states:

Hypothesis 1: Transformational leadership is positively related to follower job resources.

Need Fulfillment

Drawing on self-determination theory (SDT; Deci & Ryan, 2000), job resources are said to be intrinsically motivating when they fulfill employees' basic need for autonomy, competence, and relatedness (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). The need for autonomy refers to the need to act free and without restriction, which is likely to be fulfilled when followers are allowed to decide themselves on how they perform their work tasks. The need for competence means that people have the need to understand and explore their environment. This need may be fulfilled when they are provided with feedback on how to improve their efficiency in performing their work. The need for relatedness refers to the need for meaningful and profound relationships, which can be fulfilled when they feel their leader supports them in their work.

Sheldon and Elliot (1998) found that students' needs were fulfilled by the achievement of goals that they personally valued (self-concordant goals). In a similar vein, job resources are likely to fulfill followers' needs, because people strive to obtain, maintain, and regain resources (Hobfoll, 2002). In other words, resources are intrinsically valued by people and are therefore likely to fulfill people's needs when they are present. Although several studies have shown that transformational leaders fulfill their followers' basic needs (e.g., Kovjanic et al., 2012, 2013), we propose that transformational leaders fulfill followers' basic needs, because they provide their followers with more job resources:

Hypothesis 2: Follower job resources are positively related to follower basic need fulfillment.

Work Engagement

According to SDT, people will thrive and experience some form of autonomous motivation when their basic needs are fulfilled. Research has indeed shown that basic need fulfillment initiates several positive processes. For example, Baard, Deci, and Ryan (2004) showed that employees' basic need fulfillment was positively related to their performance evaluations and psychological adjustment at work. It is likely that employees whose needs are fulfilled are able to direct all their energy and attention toward their work which would enable them to thrive at work. In other words, employees who have their needs fulfilled, are more likely to be engaged in their work. Work engagement is a motivational, work-related state that is characterized by vigor, dedication, and absorption (Schaufeli & Bakker, 2004). That is, engaged employees have high levels of energy, are enthusiastic about their work, and are highly concentrated on their work. In their experiment, Kovjanic et al. (2013) found that after reading a transformational leadership vignette, participants reported higher need satisfaction and in turn, fulfillment of the need for competence and relatedness led to

higher work engagement. In an attempt to replicate these results and find support for the ecological validity of these results, we hypothesize:

Hypothesis 3: Follower basic need fulfillment is positively related to follower work engagement.

In-Role Performance

Engaged employees have high levels of energy and are able to direct this energy toward work, are highly concentrated on their work, and are able to cope with adversity. It is therefore not surprising that employees in this positive and active state perform better (for meta-analyses, see Christian, Garza, & Slaughter, 2011). Therefore, our next hypothesis is:

Hypothesis 4: Follower work engagement is positively related to leader ratings of follower in-role task performance.

Up to this point, we have provided theoretical arguments that suggest that transformational leaders foster their followers' in-role performance because they provide a resourceful work environment that fulfills followers' basic needs, which in turn, enhances follower work engagement. Consequently, engaged employees are able to focus their energy and address their effort to their work, which is likely to stimulate their in-role performance. Thus, we hypothesize:

Hypothesis 5: Transformational leadership is positively related to leader ratings of follower in-role performance through follower job resources, follower basic need fulfillment, and follower work engagement.

Need for Leadership

Kovjanic et al. (2012, 2013) show, both cross-sectionally and experimentally, that transformational leaders fulfill followers' basic needs. For example, transformational leaders challenge their followers while at the same time showing confidence in their followers' abilities, which contributes to the fulfillment of followers' need to feel competent. However, do transformational leaders fulfill the needs of all their followers?

To date, followers are often considered passive recipients of transformational leadership (Zhu, Avolio, & Walumbwa, 2009). However, Jermier and Kerr (1997) propose that certain follower characteristics (e.g., need for independence, ability) may neutralize the effects of leadership. Accordingly, we examine the moderating role of followers' need for leadership in the relationship between transformational leadership and followers' need fulfillment.

Taking the interactionist perspective of Woodman, Sawyer, and Griffin (1993), we propose that individuals interpret, and perceive their leader's behavior depending on their expectations regarding what a leader should provide them (need for leadership). This subjective evaluation of leadership will then determine whether or not individuals are satisfied with what they receive (need fulfillment). Considering that followers high in need for leadership rely heavily on interventions by their leader (De Vries, Roe, & Taillieu, 1998), it is likely that they rely on their leaders' behavior to have their needs fulfilled. Followers low in their need for leadership act more independently and respond less to interventions by their leader, which makes it likely that these followers will not depend on their leader to have their needs fulfilled. We therefore expect that the relationship between transformational leadership and followers' need fulfillment is stronger for followers high in their need for leadership.

Being a relatively new concept within the leadership literature, there is not much research on the moderating role of need for leadership. One exception is the study by De Vries et al. (1998), who showed that the relationship between charismatic leadership and follower job satisfaction and organizational commitment was stronger for followers with a high (vs. low) need for leadership. Based on our arguments, we hypothesize:

Hypothesis 6: The relationship between transformational leadership and followers' need fulfillment is stronger for followers with high (vs. low) need for leadership.

Method

Procedure

We tested our hypotheses in a Dutch sample of dyads consisting of one leader and one employee who filled out an online questionnaire. The participants were recruited by sending emails and making calls to the HR department of companies in different sectors to ask for their participation. Participants were asked to create a code consisting of their initials and their day, month, and year of birth to identify the dyads and at the same time ensure anonymity. For example, Anne Janssen, born on October 11th, 1990, resulted in the following code: AJ11101990. The person who created the code (leader or follower) was told to pass this code on to the other person in the same dyad (follower or leader). For some companies more than one dyad participated ($N = 18$), resulting in a structure where dyads are nested within companies. Since this may violate the independence assumption of our analyses, we calculated the intra-class correlation (ICC) to check whether there was any variance explained at the company level. The ICC showed that all variance was explained at the person level and there was no need to perform multilevel analyses.

Participants

In total, 211 dyads completed the questionnaire. However, we were unable to match 49 dyads based on their codes, resulting in 162 dyads. The leader sample consisted of 73 (45.1%) females and 89 (54.9%) males. The leaders' mean age was 44.8 years, ranging from 19 to 63 years ($SD = 10.2$). Most of the leaders were either married or cohabiting (88.9%). The follower sample consisted of 113 (69.8%) females and 49 (30.2%) males and their mean age was 38.7 years, ranging from 18 to 62 years ($SD = 14.5$). Most of the employees finished higher education (32%), had a university degree (33.3%), or finished vocational training (24.7%). Employees' marital status was mainly married or cohabiting (72.2%). Most of the dyads worked in the healthcare sector (40.1%) or business services (11.7%).

Measures

All questions were answered by the employee, except for the questions about in-role performance, which was rated by the leader.

Transformational leadership was measured using the Transformational Leadership Inventory (TLI; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). The questionnaire consists of 14 items, tapping from four different subscales (articulating vision, high performance expectations, individual support, and intellectual stimulation), that are most closely related to Bass' (1985) definition of transformational leadership. An example item is "My supervisor inspires me with his/her plans for the future." Employees answered the questions on a 7-point scale ranging from 1 (never) to 7 (always).

Job resources were measured with the scales for autonomy, feedback, and opportunities for development developed by Bakker, Demerouti, Taris, Schaufeli, and Schreurs (2003). Job resources were measured with three items each, which were answered on a 7-point scale (1 = never, 7 = always). Example items are, respectively, "I could decide myself how to perform my work," "I receive a sufficient amount of information about the results of my work," and "My job offers me the opportunity to learn new things."

Basic need fulfillment was measured using an adapted version of the Basic Need Satisfaction at Work Scale (BNS-W; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010). We explicitly measured employees' needs by adding the sentence "To what extent are your following needs at work fulfilled?" to the original items and added the word "need" to the statements. Example items are "The need to be myself at my job" (need for autonomy), "The need to feel competent at my job" (need for competence), and "The need to feel part of a group at work" (need for relatedness). Each need was measured with three items, which employees could answer on a 7-point scale ranging from 1 (not at all) to 7 (completely).

Need for leadership was measured with the need for leadership scale developed by De Vries, Roe, and Taillieu

(2002). The questionnaire consists of 17 items, including "I need my supervisor to set goals" and "I need my supervisor to help solve problems." Employees could react to these statements using a 5-point scale (1 = completely disagree, 5 = completely agree).

Work engagement was measured with the 9-item Utrecht Work Engagement scale (UWES; Schaufeli, Bakker, & Salanova, 2006). The UWES captures the three dimensions of work engagement (vigor, dedication, and absorption). Example items are "At my work, I feel bursting with energy" (vigor), "I am proud of the work that I do" (dedication), and "I feel happy when I work intensively" (absorption). Employees could answer the items on a 7-point scale (1 = never, 7 = always).

In-role task performance was measured with four items from Williams and Anderson (1991). The fourth item was reversed and resulted in a very low scale reliability (.35). We therefore removed this item from our analyses. An example item is "This employee adequately completes assigned duties." Each of the items was answered on a 7-point scale ranging from 1 (never) to 7 (always).

Strategy of Analysis

We used structural equation modeling (SEM) to test our mediation hypotheses and moderated structural equation modeling (MSEM) to test our moderation hypothesis using IBM SPSS AMOS 20 (Arbuckle, 2011). Following Cortina, Chen, and Dunlap's (2001) suggestions, we first tested our mediation hypotheses and then continued testing our moderation hypothesis. We tested our mediation hypotheses in three steps. First, we tested the measurement model to examine the construct validity of our study variables. The measurement model consisted of the scale items or dimensions tapping their latent variable. Next, we examined the structural models. Finally, we used bootstrapping to test whether the mediation was significant. To test the fit of our model to the data, we used the chi-square statistic, root-mean-square error of approximation (RMSEA), and the comparative fit index (CFI).

To test the moderation hypothesis, we used the latent variables (i.e., transformational leadership and need for leadership) and the standardized scores of these variables as indicators of the latent variables. The interaction variable also had one indicator; the multiplication of the standardized scores of the two interacting variables. The paths from the variables to their indicator were fixed at the square root of the scale reliability. We fixed the error variances of the indicators at the product of their variance and one minus their reliability. To calculate the reliability of the interaction variables we used the formula suggested by Mathieu, Tannenbaum, and Salas (1992; see Cortina et al., 2001). To examine the significance of the interaction, we looked at the path from the interaction variable to the latent variable need for leadership and we compared model fit of the model with and without the path from the interaction variable to the latent variable need for leadership (see Figure 1).

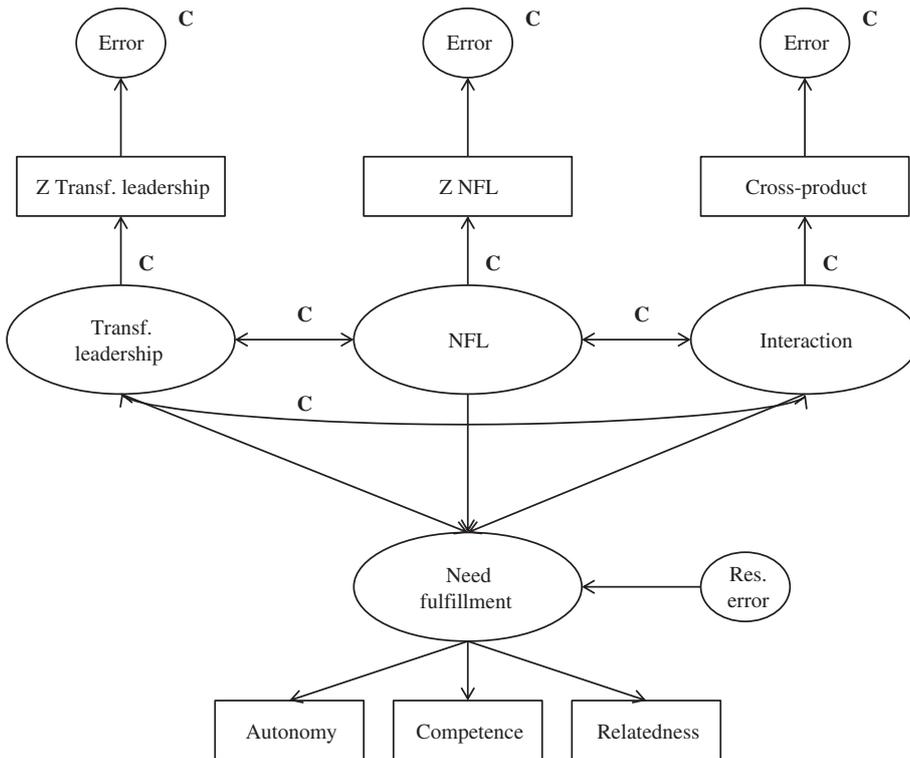


Figure 1. Need for leadership as a moderator between transformational leadership and basic need fulfillment. All constrained paths and error variances are marked with C.

Results

Descriptive Statistics

Table 1 shows means, standard deviations, internal consistencies, and intercorrelations between the study variables. All variables showed good reliability (.87 or higher).

Results of SEM

We performed a confirmatory factor analysis (CFA) to examine the construct validity of our variables. The model consisted of five factors: transformational leadership (four dimensions), job resources (three resources), need fulfillment (three needs), work engagement (three dimensions), and task performance (three items). The measurement model showed a good fit to the data ($\chi^2(94) = 167.32$;

CFI = .94; RMSEA = .07) and all indicators had significant factor loadings ($p < .01$).

The fit indices show that our proposed transformational leadership model fits well to the data: $\chi^2(100) = 223.62$; CFI = .90; RMSEA = .09. Transformational leadership was positively related to follower perception of resources ($\beta = .63, p < .001$), and follower perception of resources was positively related to followers' need fulfillment ($\beta = .45, p < .001$). In turn, follower need fulfillment was positively related to follower work engagement ($\beta = .64, p < .001$). Finally, follower work engagement was positively related to leader ratings of follower job performance ($\beta = .21, p < .05$). This means that Hypothesis 1–4 are all supported.

Next, we tested Hypothesis 5, stating that transformational leadership and leader ratings of follower task performance are related through follower perceptions of job resources, follower need fulfillment, and follower work engagement. We used the bootstrapping option in AMOS

Table 1. Means, standard deviations, internal consistencies (Cronbach's α on the diagonal), and correlations among the observed variables ($N = 162$)

	M	SD	1	2	3	4	5	6
1. Transformational leadership	4.67	0.94	(.91)					
2. Need for leadership	2.54	0.64	.51**	(.90)				
3. Job resources	4.00	0.58	.51**	.25**	(.90)			
4. Need fulfillment	5.32	0.73	.27**	-.01	.29**	(.87)		
5. Work engagement	5.06	1.03	.53**	.20*	.50**	.49**	(.94)	
6. Task performance	6.03	0.85	.13	.02	.24**	.26**	.18*	(.88)

Note. * $p < .05$, ** $p < .01$.

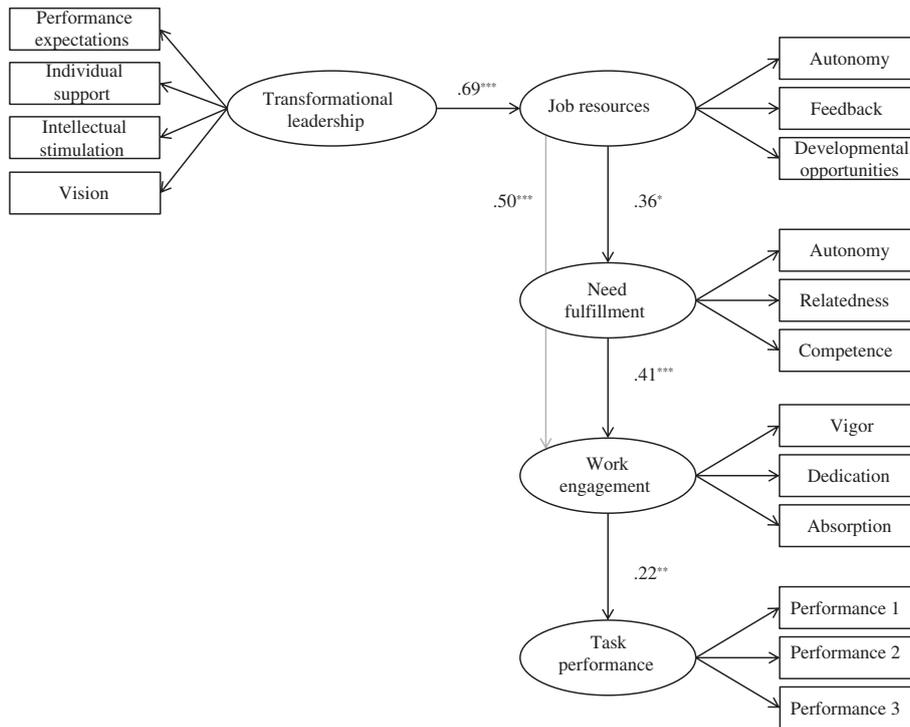


Figure 2. The process model of transformational leadership showing standardized estimates.

to obtain estimates and bias-corrected confidence intervals. Results offered support for Hypothesis 5: estimate = .10; $p < .01$; $.03 \leq \text{B-CCI} \leq .19$.

Alternative Models

Additionally, we tested several alternative models. First, we tested the direct effects model, including paths from transformational leadership, job resources, need fulfillment, and work engagement to follower task performance. We compared the fit of the direct effects model to our hypothesized model and the results showed a significant increase in chi-square ($\Delta\chi^2(2) = 149.84$, $p < .001$), indicating that our hypothesized model fits better to the data.

We continued testing a model including the direct effect from transformational leadership to leader-rated job performance, because previous research has shown a direct positive effect of transformational leadership on task performance (Lowe et al., 1996). The direct relationship between transformational leadership and leader-rated job performance was not significant (estimate = .01, *ns*) and there was no significant decrease in chi-square ($\Delta\chi^2(1) = .02$, *ns*), so we prefer our hypothesized, more parsimonious model.

Next, we tested a model including a direct effect from follower job resources to follower work engagement, as they have been directly and positively associated in previous research (Crawford, LePine, & Rich, 2010). The results showed a direct and positive relationship between follower job resources and follower work engagement (estimate = .50, $p < .01$) and a significant decrease in chi-square ($\Delta\chi^2(1) = 36.45$, $p < .001$), indicating that the model

including one direct effect (from resources to work engagement) fits best to our data. Therefore, we included this direct effect in our final model (see Figure 2). This final model explained 42.9% of the variance in job resources, 20.5% of the variance in need fulfillment, 41.6% of the variance in work engagement and finally, 4.5% of the variance in task performance.

Finally, we tested a reversed causation model. We also included a path from follower work engagement to transformational leadership, because followers who are engaged in their work may view their leader more positively. Because the degrees of freedom in this model do not differ from the degrees of freedom in our final model (Figure 2), we cannot compare these two models using the regular fit indices. Therefore, we used Akaike's Information Criterion (AIC), which is useful for comparing non-nested models. Lower AIC values indicate better fit. Comparing the AIC values of our final model (262.25) to the reversed causation model (297.65) indicates that our final model fits better to the data.

Results of MSEM

Table 2 shows the results of the moderation analysis. Transformational leadership was positively related to need fulfillment, while need for leadership was negatively related to need fulfillment. Importantly, as predicted in Hypothesis 6, the interaction between transformational leadership and need for leadership was significantly related to need fulfillment. This model fits well to our data ($\chi^2(9) = 14.26$; CFI = .97; RMSEA = .06). Furthermore, this model fits better to our data compared to the model without the path from the interaction factor to the endogenous factor

Table 2. Results of the moderated structural equation modeling analysis ($N = 162$ dyads)

Predictor	Need fulfillment		
	UPC	S.E.	SPC
Transformational leadership	.25	.07	.51***
Need for leadership	-.28	.12	-.32*
Transformational Leadership \times Need for Leadership	.11	.05	.21**
R^2	17.9%		

Note. UPC = unstandardized path coefficient; SPC = standardized path coefficient. * $p < .05$, ** $p < .01$, *** $p < .001$.

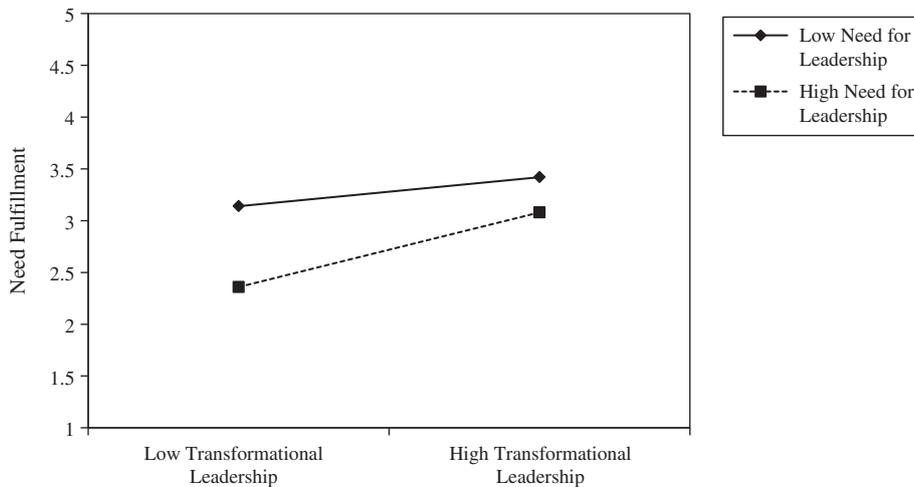


Figure 3. Need for leadership as a moderator in the relationship between transformational leadership and basic need fulfillment.

($\Delta\chi^2(1) = 5.61, p < .001$). The moderation is graphically represented in Figure 3. The slope for followers low in need for leadership was nonsignificant ($t = .87, ns$), meaning that the need fulfillment of these followers is not dependent on their leaders' transformational leadership. In contrast, the slope for followers high in need for leadership was positive and significant ($t = 2.23, p < .05$), indicating that the needs of these followers are more fulfilled when their leader shows many transformational leadership behaviors. This means that Hypothesis 6 is accepted.

Discussion

The present study aimed to shed light on the underlying mechanism explaining how transformational leaders contribute to their followers' task performance. We hereby answer Yukl's (2010) call for more research on both mediating and moderating variables that are associated with the outcomes of transformational leadership.

Theoretical Contributions

The processes through which transformational leaders exert their influence on followers' task performance are still

referred to as the "black box" of transformational leadership (Ilies, Judge, & Wagner, 2006). In an attempt to make a more integrated effort to show how transformational leadership and followers' task performance are related, we proposed a new, sequential, and promising mechanism to explain why followers perform better when their leader shows more transformational leadership behavior. In line with the management of meaning perspective, we found that transformational leaders have a positive influence on followers' work environment. Followers who rated their leader as more transformational indicated that they worked in a more resourceful environment. This positive and stimulating work environment, in turn, contributed to follower basic need fulfillment. Consequently, this need fulfillment allows followers to thrive and become engaged in their work. Finally, this active, engaged state, enables followers to direct their energy toward their work and therefore contributes to followers' task performance as indicated by their leader.

We also contribute to the literature because we treated followers as active recipients of transformational leadership, while most other studies on leadership treat followers as passive recipients of leadership (Zhu et al., 2009). In other words, we proposed that the interaction between transformational leaders and their followers determines the effectiveness of transformational leadership. Indeed, we showed that need fulfillment of followers high in their

need for leadership is dependent on the amount of transformational leadership behavior shown by their leader, while the need fulfillment of followers low in their need for leadership was not dependent on the amount of transformational leadership behavior shown by their leader. In other words, leaders are only able to influence their followers to a certain extent and some followers are able to manage without their leader. We show that it is important to acknowledge that the effectiveness of transformational leadership is, at least to some extent, dependent on certain follower characteristics.

Practical Implications

We showed that followers were more engaged and performed better when their leaders showed more transformational leadership behavior. Therefore, it is important for organizations to stimulate their leaders' transformational leadership behavior. According to Barling, Weber, and Kelloway (1996) leaders can be trained to show more transformational leadership behavior within a relatively short time-period. Barling et al. developed a transformational leadership training. After the training, managers received higher scores from their followers on intellectual stimulation, charisma, and individual consideration compared to the control group that did not receive any training and compared to their transformational leadership behavior 2 weeks before they started the training.

We showed that the need fulfillment of followers low in need for leadership is unaffected by transformational leadership behaviors. Thus, when the majority of followers are low in their need for leadership, for example when followers are independent workers, other leadership styles may contribute to the need fulfillment of these followers. For example, empowering leaders may be able to fulfill the needs of followers low in their need for leadership, because these leaders encourage and facilitate followers to lead themselves (Pearce & Sims, 2002). Empowering leaders encourage followers to take responsibility, work independently, seek learning opportunities, and view problems as challenges. It has been shown that empowering leaders are able to stimulate followers' work engagement (Tuckey, Bakker, & Dollard, 2012), but this may be especially true for followers low in their need for leadership.

Limitations and Future Research

Despite its strengths, one of the limitations of our study is its cross-sectional design. Since the results of our study are promising, it is worthwhile to test these relationships using a longitudinal or experimental design to establish causality. Although it seems unlikely that followers have more resources because their needs are fulfilled, it has been shown that work engagement builds job resources, because resources often come in tandem (e.g., Hobfoll, 2002).

Future research could also examine these relationships on a daily basis using a daily diary design, since it has been suggested that leadership effects operate primarily within a short time-period (Van Dierendonck, Haynes, Borrill, & Stride, 2004).

According to Conway and Lance (2010), authors should be able to provide arguments for the use of self-reports. We believe that self-reports are appropriate in our study, because we focus on private events (i.e., work engagement and need fulfillment) that are best reported by followers themselves. Furthermore, we focus on how transformational leadership is *perceived* and how it influences followers' *perceived* work environment. Conway and Lance also argue that authors should provide information about the construct validity of their measures to reduce the impact of common method bias. In the present study, the validity of our constructs is reflected in the fit of the measurement model and the significance of the factor loadings. Finally, we took precautions to prevent common method from biasing the results by using different sources to obtain measures for the predictor and criterion variable and ensuring participants' anonymity by using a code to identify the different dyads.

Piccolo and Colquitt (2006) state that there has not been much research attention for job-related factors that mediate the relationship between transformational leadership and follower outcomes, which is surprising considering that leaders are in a position of power and are role models to their followers. It is likely that transformational leaders influence multiple job resources. Hence, it would be interesting for future research to include also other resources, such as skill variety, to examine whether some resources are more strongly influenced by the leader than others. In a similar vein, it would be interesting for future research to examine whether some resources fulfill all three basic needs, while others may only fulfill one or two needs.

A final interesting path for future research to follow is that of leader behaviors and followers' need for leadership. According to De Vries et al. (2002), the need for leadership may change with circumstances. For example, when someone is lacking a needed competence, that person is said to have a higher need for leadership. On the one hand, transformational leaders may actually reduce followers' need for leadership by inducing feelings of competence. That is, transformational leaders stimulate their followers' individual development and encourage followers to think independently, which may enhance followers' feelings of competence and consequently, reduce their need for leadership. On the other hand, transformational leaders may actually increase followers' need for leadership, because they stimulate their followers to grow and develop. This may increase followers' dependency on their leader and followers' need to develop themselves further. Previous research supports this paradox: Transformational leaders both empower their followers and increase followers' dependence on the leader (Kark, Shamir, & Chen, 2003). In line with the interactionist perspective of Woodman et al. (1993), whether or not followers become more empowered

by their leader or become more dependent on their leader, may depend on the expectations that followers have about their leader.

References

- Arbuckle, J. L. (2011). *IBM SPSS Amos 20 user's guide*. Chicago, IL: SPSS.
- Avolio, B. J., & Yammarino, F. J. (2002). *Transformational and charismatic leadership: The road ahead*. Oxford, UK: Elsevier Science.
- Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology, 34*, 2045–2068. doi: 10.1111/j.1559-1816.2004.tb02690.x
- Bakker, A. B., Demerouti, E., Taris, T., Schaufeli, W. B., & Schreurs, P. (2003). A multi-group analysis of the Job Demands-Resources model in four home care organizations. *International Journal of Stress Management, 10*, 16–38. doi: 10.1037/1072-5245.10.1.16
- Barling, J., Weber, T., & Kelloway, K. E. (1996). Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *The Journal of Applied Psychology, 81*, 827–832. doi: 10.1037/0021-9010.81.6.827
- Bass, B. M. (1985). *Leadership performance beyond expectations*. New York, NY: Academic Press.
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology, 64*, 89–136. doi: 10.1111/j.1744-6570.2010.01203.x
- Conway, J. M., & Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business and Psychology, 25*, 325–334. doi: 10.1007/s10869-010-9181-6
- Cortina, J. M., Chen, G., & Dunlap, W. P. (2001). Testing interaction effects in LISREL: Examination and illustration of available procedures. *Organizational Research Methods, 4*, 324–360. doi: 10.1177/109442810144002
- Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *The Journal of Applied Psychology, 95*, 834–848. doi: 10.1037/a0019364
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and self-determination of behavior. *Psychological Inquiry, 11*, 319–338. doi: 10.1207/S15327965PLI1104_01
- De Vries, R. E., Roe, R. A., & Taillieu, T. C. B. (1998). Need for supervision: Its impact on leadership effectiveness. *Journal of Applied Behavioral Science, 34*, 486–501. doi: 10.1177/0021886398344015
- De Vries, R. E., Roe, R. A., & Taillieu, T. C. B. (2002). Need for leadership as a moderator of the relationships between leadership and individual outcomes. *Leadership Quarterly, 13*, 121–137. doi: 10.1016/S1048-9843(02)00097-8
- Fuller, J. B., Patterson, C. E. P., Hester, K., & Stringer, D. Y. (1996). A quantitative review of research on charismatic leadership. *Psychological Reports, 78*, 271–287. doi: 10.2466/pr0.1996.78.1.271
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology, 6*, 307–324.
- Ilies, R., Judge, T., & Wagner, D. (2006). Making sense of motivational leadership: The trial from transformational leaders to motivated followers. *Journal of Leadership & Organizational Studies, 13*, 1–22. doi: 10.1177/10717919070130010301
- Jermier, J. M., & Kerr, S. (1997). “Substitutes for leadership: Their meaning and measurement” – contextual recollections and current observations. *The Leadership Quarterly, 8*, 95–101. doi: 10.1016/S1048-9843(97)90008-4
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *The Journal of Applied Psychology, 89*, 755–768. doi: 10.1037/0021-9010.89.5.755
- Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *The Journal of Applied Psychology, 88*, 246–255. doi: 10.1037/0021-9010.88.2.246
- Kovjanic, S., Schuh, S. C., & Jonas, K. (2013). Transformational leadership and performance: An experimental investigation of the mediating effects of basic needs satisfaction and work engagement. *Journal of Occupational and Organizational Psychology, 86*, 543–555. doi: 10.1111/joop.12022
- Kovjanic, S., Schuh, S. C., Jonas, K., Van Quaquebeke, N., & Van Dick, R. (2012). How do transformational leaders foster positive employee outcomes? A self-determination-based analysis of employees' needs as mediating links. *Journal of Organizational Behavior, 33*, 1031–1052. doi: 10.1002/job.1771
- Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly, 7*, 385–425. doi: 10.1016/S1048-9843%2896%2990027-2
- Mathieu, J. E., Tannenbaum, S. I., & Salas, E. (1992). Influences of individual and situational characteristics on measures of training effectiveness. *Academy of Management Journal, 35*, 828–847.
- Nielsen, K., Randall, R., Yarker, J., & Brenner, S. (2008). The effects of transformational leadership on followers' perceived work characteristics and psychological well-being: A longitudinal study. *Work & Stress, 22*, 16–32. doi: 10.1080/02678370801979430
- Pearce, C. L., & Sims, H. P. (2002). Vertical versus shared leadership as predictors of the effectiveness of change management teams: An examination of aversive, directive, transactional, transformational, and empowering leader behaviors. *Group Dynamics: Theory, Research, and Practice, 6*, 172–197. doi: 10.1037/1089-2699.6.2.172
- Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal, 49*, 327–340.
- Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effect on followers' trust in leader, satisfaction and organizational citizenship behaviors. *The Leadership Quarterly, 1*, 107–142. doi: 10.1016/1048-9843(90)90009-7
- Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and job design. *Administrative Science Quarterly, 23*, 224–253.
- Schaufeli, W. B., & Bakker, A. B. (2004). Work engagement: The measurement of a concept. *Gedrag en Organisatie, 17*, 89–112.
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement, 66*, 701–716. doi: 10.1177/0013164405282471

- Sheldon, K. M., & Elliot, A. J. (1998). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, *76*, 482–497. doi: 10.1037/0022-3514.76.3.482
- Smircich, L., & Morgan, G. (1982). Leadership: The management of meaning. *Journal of Applied Behavioral Science*, *18*, 257–273. doi: 10.1177/002188638201800303
- Tuckey, M. R., Bakker, A. B., & Dollard, M. F. (2012). Empowering leaders optimize working conditions for engagement: A multilevel study. *Journal of Occupational Health Psychology*, *17*, 15–27. doi: 10.1037/a0025942
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationship between job characteristics, burnout, and engagement: The role of basic psychological need satisfaction. *Work & Stress*, *22*, 277–294. doi: 10.1080/02678370802393672
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B., & Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational and Organizational Psychology*, *83*, 981–1002. doi: 10.1348/096317909X481382
- Van Dierendonck, D., Haynes, C., Borrill, C., & Stride, C. (2004). Leadership behavior and subordinate well-being. *Journal of Occupational Health Psychology*, *9*, 165–175.
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, *17*, 601–617.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *The Academy of Management Review*, *18*, 293–321. doi: 10.5465/AMR.1993.3997517
- Yukl, G. (2010). *Leadership in organizations* (7th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Zhu, W., Avolio, B. J., & Walumbwa, F. O. (2009). Moderating role of follower characteristics with transformational leadership and follower work engagement. *Group & Organization Management*, *34*, 590–619. doi: 10.1177/1059601108331242

Kimberley Breevaart

Institute of Psychology
Erasmus University Rotterdam
Woudestein, T12-45, P.O. Box 1738
3000 DR Rotterdam
The Netherlands
Tel. +31 10 408-9034
Fax +31 10 408-9009
E-mail breevaart@fsw.eur.nl