CURRENT RESEARCH IN SOCIAL PSYCHOLOGY

THE RELATIONSHIP BETWEEN EMPLOYEES' OCCUPATIONAL SELF-EFFICACY AND PERCEIVED TRANSFORMATIONAL LEADERSHIP-REPLICATION AND EXTENSION OF RECENT RESULTS[1]

Jörg Felfe
University of Halle, Germany

Birgit Schyns
University of Leipzig, Germany

ABSTRACT

The relationship between transformational leadership and self-efficacy is not yet fully explained. Different hypotheses have been posed ranging from positive to negative relationships between the constructs. The aim of this study is to further clarify how transformational leadership and self-efficacy relate. In addition, this paper considers possible moderators of this relationship. Task demands and climate are tested as moderators of the relationship between transformational leadership and self-efficacy. Although the relationships between transformational leadership and self-efficacy are virtually zero in the correlational analysis, interaction effects of transformational leadership and task demands are found. In an overall analysis, task demands is the best predictor for self-efficacy.

[137]
----
[138]

INTRODUCTION

Inspired by House's (1976) theory of charismatic leadership, Bass (1985) introduced the theoretical concept of transformational leadership. Although originally going back to trait theories of leadership, transformational leadership is concerned with leader behavior. Transformational leaders are able to manage change and transform followers, which is essential for competitiveness and long-range organizational improvement. In order to find out about exceptional leader behavior, Bass (1985) and other authors (e.g. Tichy & Devanna, 1986)

interviewed leaders and subordinates and asked them to name the behaviors of exceptional leaders they have met in their occupational life. According to these interviews, exceptional leaders offer value-based, attractive visions for the future, communicate their aims and strategies in a convincing manner, offer trust and confidence. Since Bass' research, consensus has been found concerning the core facets of transformational and charismatic leadership. They are: vision, inspiration, role modeling, support of personal growth, trust, and consideration of followers' needs (Shamir, House & Arthur, 1993). Leaders influence followers' values, self-esteem, and self-concept and subordinates consequently show higher levels of effort, performance, satisfaction and commitment.

In the last decade, a large quantity of research has examined the relationships between transformational leadership and several antecedents and consequents such as antecedent personality factors and context variables on the one hand, and attitudinal (commitment, loyalty, satisfaction) as well as behavioral (organizational citizenship behavior, performance) consequents on the other hand. At least two meta-analyses have also been presented (Fuller, Patterson, Hester & Stringer, 1996; Lowe, Kroeck & Sivasubramaniam, 1996), underlining the dominating role of this approach.

[138]
----
[139]

In their model Bass and Avolio (1990, 1995) distinguish between two facets of leadership styles: transactional and transformational leadership behaviors. According to these researchers, leaders who concentrate on creating fair exchange relationships with their subordinates by identifying their needs and offering exchange rewards for acceptable results are regarded as transactional executives. Transformational leadership goes beyond transactions and improves followers' commitment by influencing their needs, values, and self-esteem. Bass and Avolio (1995) classified those behaviors into four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. According to Bass, charisma is an important facet of transformational leadership behavior.

Transactional and transformational leadership are not independent or opposite behavior patterns. Contingent reward as a transactional behavior allows followers to experience reliability and consistency, which is an important basis of a transformational relationship. Leaders can act both in a transformational and in a transactional manner as they combine transformational and transactional behaviors in their respective leadership style. Higher levels of performance and extra effort, as well as higher satisfaction, are expected from the followers when executives behave in a more transformational manner.

The relationship between transformational leadership and followers' characteristics has been a topic in several studies. Two kinds of relationships between transformational leadership and self-efficacy are discussed in the literature and research on leadership. Schyns (2001a) proposed, for example, that self-efficacy can be seen as a precondition for employees to be able to perceive transformational leadership in the first place. Other authors, however, have asserted that transformational leaders influence their subordinates' self-efficacy (e.g. Shamir, House, & Arthur, 1993; Kirkpatrick & Locke, 1996). In this study, we want to further clarify the nature of this relationship, taking into account intervening variables.

Transformational Leadership and Followers' Characteristics

Shamir et al. (1993) propose that transformational leaders enhance the self-esteem of their followers. This hypothesis is supported by research on the Pygmalion effect (e.g. Eden, 1990). Pygmalion research is concerned with the (induced) expectations leader have of their followers. Leaders alter their behavior towards those employees for whom they (after the induction of an expectation) have high expectations. This leader behavior results in higher self-efficacy of the respective employees (e.g. Sutton & Woodman, 1989). In a Pygmalion-like approach, Sutton and Woodman (1989) found that leaders behaved in a way that increased subordinates' self-efficacy when the leaders were (falsely) informed that these subordinates had high potential. As high expectations are important in transformational leadership as well (Bass, 1985, states that "Charismatics take advantage of the Pygmalion effect …" p. 47), it appears logical that transformational leaders enhance subordinates' self-efficacy. This could be interpreted in line with the hypothesis put forward by Shamir et al. (1993).

[139]
----
[140]

Klein and House (1998) put forward three contradicting assumptions concerning the relationship between transformational leadership and attributes of subordinates: a) Subordinates of transformational leaders are somehow "weak". They need transformational leaders in order to become stronger. b) Subordinates of transformational leaders are compatible with these leaders. They share characteristics with them and are thus more drawn to the vision their leaders articulate. In terms of self-efficacy, this would imply that subordinates share the high self-efficacy of their transformational leaders. c) Subordinates of transformational leaders are not different from subordinates of non-transformational leaders.

De Vries, Roe, and Taillieu (1999) concentrated on followers' **need for leadership** and transformational leadership. They found positive correlations between the need for leadership and transformational leadership (r = .24). This could be interpreted in line with Klein and House's first assumption, implying that subordinates of transformational leaders are weak. Also, theoretically in line with the first assumption of Klein and House (1998), Podsakoff, MacKenzie, and Bommer (1996) examined **need for independence** of followers as a moderator between transformational leadership behaviors and criterion variables such as satisfaction, commitment, and organizational citizenship behavior. Whereas the correlations between need for leadership and transformational leadership behaviors were virtually zero (-.03 - .07), seeming to support Klein and House's third assumption, need for leadership served as a moderator for some of the relationships between transformational leadership behaviors and criterion variables.

Empirical results, however, also support the assumption that subordinates have to be compatible with their leader in order to perceive transformational leadership. Keller (1999) focused on implicit leadership and personality traits and concluded that employees perceive transformational leadership when they believe that they are similar to their leaders. Focussing on the preference for kinds of leaders, Ehrhart and Klein (2001) included **achievement orientation** and **high self-esteem** in their study. Both constructs correlated positively but low with preference for transformational leadership (r = .16). Thus, the concept of compatibility is supported here. This could be interpreted in line with Klein and House's second assumption. With respect to self-efficacy, a positive relationship to transformational leadership could be assumed from these results. To sum up, the results are somewhat contradictory as there is some

empirical evidence for each of the hypotheses on the relationship between transformational leadership and self-efficacy.

[140]
----
[141]

In a recent study, Schyns (2001a) focused on the relationship between perceived transformational leadership and occupational self-efficacy. Her aim was to find out how self-efficacy as a characteristic of employees is related to the employee ratings of transformational leadership. Her results indicate a positive relationship between transformational leadership and (occupational) self-efficacy. This result can be explained in two different ways: a) Self-efficacy could be a precondition for the perception of transformational leadership. b) Transformational leaders might enhance their followers' self-efficacy, for example through the confidence they express towards them (Houses & Shamir, 1993).

Schyns' study (2001a) had some restrictions we want to overcome in this paper. First, the sample consisted of participants with rather high self-efficacy, which might have caused a ceiling effect. Second, the sample was quite small and rather heterogeneous. Third, Schyns (2001a) used a composite measure of transformational leadership so that possible specific relationships could not be detected. Additionally, the influence of situational factors was neglected. According to the approach proposed by Podsakoff et al. (1996), who examined the moderating effects of substitutes of leadership on the relationship between leadership and different outcome variables, the relationship between leadership and self-efficacy might be influenced by context parameters. An examination of possible moderators might help to understand the contradictory findings. In this study, we focus on task demands and climate. In line with Bandura's theory of self-efficacy, we propose that sufficient task demands provide the possibility to develop competencies and to experience control and success. A positive climate serves as a social support that helps employees cope with difficulties.

Transformational Leadership and Self-Efficacy

As stated above, Schyns (2001a) used a combined instrument for the assessment of transformational leadership. As we believe that regarding the subscales of transformational leadership will add to our understanding of the relationship between transformational leadership and self-efficacy, we will take a closer look at the subdimensions used in the Multifactor Leadership Questionnaire (MLQ Form 5X Short; Bass & Avolio, 1995, translated and adapted version by Felfe & Goihl, 2002), the most widely used instrument to assess transformational leadership. In the following section, we will describe the subscales of transformational and transactional leadership in order to deduce hypotheses concerning their relationship to self-efficacy. The Multifactor Leadership Questionnaire (MLQ Form 5X Short) consists of the following dimensions (Bass & Avolio, 1995): idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. In addition, the MLQ assesses transactional leadership using the dimensions contingent reward and management by exception, which will be considered in the next section.

[141]
----
[142]

Idealized influence refers to the ability to exert influence by serving as a role model,

demonstrating both high commitment and high moral standards. Such leaders exhibit what they expect others to do. Their legitimacy is based on personal integrity and competence. Furthermore, they earn trust and respect because they are ready to take personal risks. In this way they display a high degree of self-efficacy. Followers develop a high degree of admiration and try to emulate such executives. As idealized influence reflects behavioral aspects of the leader as well as attributional components on the part of the followers, this style is divided into two sub dimensions: idealized influence attributed (IIa) and idealized influence behavior (IIb).

Because transformational leaders serve as models for high self-efficacy via attributed idealized influence and because followers try to emulate them, we hypothesize a positive relationship to followers' self-efficacy.

H1a: Attributed idealized influence and self-efficacy are positively related.
H1b: Idealized influence behavior and self-efficacy are positively related

Inspirational motivation (IM) refers to the ability to offer a convincing vision and attractive goals. The vision presented is not only based on material rewards but also provides meaning by addressing the higher order needs such as the personal growth of the followers. Additionally, such leaders display optimism and encourage their subordinates. We propose that this encouragement, as well as the chance offered for personal growth, has a positive influence on followers' self-efficacy (e.g. through verbal persuasion).

H1c: Inspirational motivation is positively related to self-efficacy.

Intellectual stimulation (IS) refers to the presence of various kinds of involvements and opportunities for participation. When assumptions can be questioned, problems can be reframed, and tasks are challenging, followers feel stimulated. Creativity and innovations are required and encouraged in a supportive climate. For this subscale, we again hypothesize a similar effect as we proposed for inspirational motivation. The supportive climate should enhance followers' self-efficacy.

H1d: Intellectual stimulation is positively related to self-efficacy.

Individualized consideration (IC) implies that a leader takes on the role of a coach or mentor. This role involves the ability to recognize individual differences concerning needs for autonomy, encouragement, support, responsibility, structure and instructions. Subordinates are considered unique individuals. We hypothesize that this individual support is important for employees' self-efficacy.

[142]
----
[143]

H1e: Individualized consideration is positively related to self-efficacy for employees.

In order to compare our results, we also use a combined measure for transformational leadership in this study. As most of the empirical results and our hypotheses suggest a positive correlation, we hypothesize that:

H2: Transformational leadership and self-efficacy are positively related.

Transactional Leadership and Self-Efficacy
Although transformational and transactional leadership are often regarded as antagonists, they can also be regarded as complimenting each other (Bass & Avolio, 1993). An augmentation effect can be found for transformational leadership when it undergoes a regression analysis together with transactional leadership as independent variables and with effectiveness as dependent variable (e.g. Hater & Bass, 1988). This means that, in addition to transactional leadership, transformational leadership adds to the explanation of variance of organizational outcome variables.

The relationship between transactional leadership and self-efficacy has not been considered in Schyns' study (2001a). To further contribute to the knowledge of the relationship between leadership and self-efficacy, we address this issue in this paper. Transactional leadership is characterized by a "fair negotiation" with respect to demands and rewards, leading to a state of mutual agreement between leaders and followers. In this sense, executives and subordinates are business partners in a deal, in which "good work earns good wages". Transactional leaders are supposed to clarify tasks, responsibilities, and expectations without using visionary leadership. This style is broken down into two dimensions. In the next section, we will describe transactional leadership in more detail and set up hypotheses as to the relationship between transactional leadership and self-efficacy.

The first dimension of transactional leadership is **contingent reward,** which involves the clarification of each person's tasks, responsibilities, and expectations. Leader and follower agree upon what is required, what resources are necessary, and what is a fair and just reward when the expectations are met. The main strategy is the positive or negative contingent reinforcement depending on performance. We hypothesize that this contingent reward behavior is also important for employees' self-efficacy but less significant than transformational leadership.

[143]
----
[144]

H3a: Contingent reward is positively related to employees' self-efficacy.

Management by exception, the second dimension, emphasizes the maintenance of the status quo by assuring that subordinates behave correctly within a given framework of structures, rules and standards. Management by exception may appear in a more active form (MBA), with **active** monitoring and correction before things go wrong, or in a more **passive** form (MBP), where executives wait passively and react when mistakes and problems occur. As the active aspect of management by exception involves the control of employees, we hypothesize that it is negatively related to self-efficacy. Employees are not given the opportunity to develop their self-efficacy through, for example, support or stimulation.

H3b: Management by exception active is negatively related to self-efficacy.

Passive management by exception, as well as laissez-faire, which are both contained in the MLQ, are not considered here as they are both forms of ineffective leadership.

Moderating Effects

The relationship between some leadership behaviors and self-efficacy is likely moderated by the task an employee has to fulfil. Bandura stresses that an important determinant of self-efficacy is mastery experience (1977, 1997). We therefore hypothesize that when sufficient or high task demands are provided - in other words, when the opportunity for mastery experience is offered - the influence of transformational leadership on employees' self-efficacy decreases. In the case of high task demands, transformational leadership has a smaller effect on self-efficacy. We hypothesize that

H4: (a) Task demands serve as a predictor for self-efficacy. (b) The relationship between transformational leadership and self-efficacy is moderated by task demands in the sense that a positive relationship will exist only for employees with lower task demands. For employees with higher task demands the strength of the relationship will be weaker.

Another potential moderator is climate. It is likely that transformational leadership can exert a more positive influence on employees' self-efficacy when the overall working climate is experienced as satisfactory (good relationships to direct colleagues and members of other divisions). A positive working climate is an indicator of a sense of social support. Based on Bandura's (1977, 1997) theory of self-efficacy, it can be deduced that social support is an important factor for the maintenance and development of self-efficacy in occupational contexts. As climate is composed of co-worker support and to some degree of leader support, a positive climate will be a condition conducive to the relationship between transformational leadership and self-efficacy.

[144]
----
[145]

H5: (a) Climate serves as a predictor for self-efficacy. (b) The relationship between transformational leadership and self-efficacy is moderated by climate in so far as the relationship will be positive only when the climate is also positive. For low climate the relationship will be lower.

These two hypotheses may appear contradictory as hypothesis 4 predicts that high task demands will lower the relationship between transformational leadership and self-efficacy, whereas hypothesis 5 predicts that climate will enhance this relationship. This apparent contradiction is, however, based on Bandura's theory of self-efficacy. According to Bandura (1982), mastery experience has the strongest influence on self-efficacy. As social support and therefore transformational leadership is less influential (Bandura, 1982), its influence is supposed to be diminished by mastery experience – here assessed by task demands.

However, we can also assume that leaders influence followers' self-efficacy to a greater extent than co-workers, as a leader is likely regarded as a more competent source of information about one's performance and performance abilities (Webster & Sobieszek, 1974). Considering the fact that climate is composed not only of co-worker support but also of leader support, a positive climate will likely be a condition conducive to the positive relationship between transformational leadership and self-efficacy.

As all transformational subscales are highly positively correlated, no differences are expected

between the subscales with respect to the moderating effects under investigation here.

METHOD

Participants

The sample included 504 participants working for a public administration organization. The participants worked in five different departments. 33.3% of the participants were male; 66.7% female. For the distribution of age categories see Table 1. For the distribution of tenure see Table 2. 10.8% have or had a position as a superior, 89.2% have / had not.

[145]
----
[146]

Table 1. Age Distribution of Participants

Age	Percentage
Under 30	10.5
31 to 40	28.5
41 to 50	34.6
Over 50	26.5

Table 2. Organizational Tenure of Participants

Tenure	Percentage
Less than 2 years	16.5
2 to 5 years	17.1
6 to 10 years	34
More than 10 years	31.8

Measures

Transformational leadership. Transformational leadership was assessed using the transformational scales of the Multifactor Leadership Questionnaire (MLQ Form 5X Short; Bass and Avolio, 1995; adapted and translated by Felfe & Goihl, 2002a). A Likert-type response scale with five categories was used, ranging from one ('not at all true') to five ('completely true'). There are five transformational scales of the MLQ: idealized influence attributed, idealized influence behavior, individualized consideration, intellectual stimulation, and inspirational motivation. The internal consistencies (Cronbach's alpha) of the scales were alpha = .91, alpha = .77, alpha = .88, alpha = .85, and alpha = .83, respectively.

[146]
----
[147]

In order to be able to compare our results with Schyns (2001a), a combined transformational leadership scale was constructed. The internal consistency (Cronbach's alpha) of the combined

scale was alpha = .94.

The MLQ also contains two subscales for the assessment of transactional leadership: contingent reward and management by exception active. The internal consistencies (Cronbach's alpha) of the scales were alpha = .79, alpha = .64, respectively.

Occupational Self-Efficacy Scale. The Occupational Self-Efficacy Scale (OCCSEFF; Schyns & v. Collani, in press) is a work-related, generalized scale that is applicable to different work place contexts, as well as to different organizations. The scale thus seemed to be especially useful in this context, as participants with various occupations were questioned. Originally, it consisted of 20 items. In this study, we used a shortened ten-item version. A sample item is the following: "When I make plans concerning my occupational future, I'm certain I can make them work." A Likert-type response scale with five categories was used, ranging from one ("not at all true") to five ("completely true"). The internal consistency (Cronbach's alpha) was alpha = .81.

Task demands. To measure high or low task demands, a short subscale was used (Felfe, Resetka, & Liepmann, 1994) originating from an instrument which assesses different facets of working conditions (good and adequate payment, sufficient job security, interesting tasks). Participants were asked to answer to what extent single work features are fulfilled on a five-point scale. The subscale to measure task demands consists of 3 items that reflect the degree of autonomy and responsibility the participant experiences in his/her work and the attractiveness of the tasks he/she carries out. Participants were asked to what extent the following conditions are satisfied: (1) "the work can be carried out autonomously and independently," (2) "the work content is interesting and diversified," and (3) "it is possible to identify personally with the task." A Likert-type response scale with five categories was used, ranging from one ("not at all true") to five ("completely true"). The internal consistency (Cronbach's Alpha) was alpha = .69.

Climate. To assess satisfactory climate, another short subscale from the screening instrument to assess different facets of working conditions was used (Felfe, Resetka, & Liepmann, 1994). Participants were again asked to assess, using a five-point scale, the extent to which single climate-related work features are satisfied. The scale assessing climate conditions also consists of three items that reflect the relationship to internal colleagues, as well as to colleagues from other divisions in the organization. Participants were asked the extent to which the following conditions are satisfied: (1) "good relationships exist amongst colleagues," (2) "there is a good overall climate in the organization," and (3) "good relationships exist with superiors". A Likert-type response scale with five categories was used, ranging from one ("not at all true") to five ("completely true"). The internal consistency (Cronbach's Alpha) was alpha = .74.

[147]
----
[148]

Procedure

The management informed the participants about the study prior to the distribution of questionnaires. The questionnaires were distributed via internal mail and recollected by the work council. The aim of the study was explained on the first page of the questionnaire. Participants were assured confidentiality.

Analysis

In order to test the moderating effects hypothesized here, we conducted standard multiple regressions. We used a procedure recommended by Tabachnick and Fidell (2001): In addition to the predictors, an interaction term was included in the regression analysis. The independent variables were centered to their mean. The interaction term was computed with the centered variables. In order to be able to interpret the kind of moderation, plots were used when the interactions became statistically significant (see Tabachnick & Fidell, 2001, p. 152).

RESULTS

Preliminary Analyses
Prior to testing the hypotheses, tests were done in order to find out if the demographic variables have any relationship to the perception of transformational leadership. Whereas age had no significant correlation to perceived transformational leadership, length of employment showed a significant but rather small correlation (r -.02 and -.11). Significant differences emerged between male (M = 2.83) and female participants (M = 3.12; F (497) = 10.08, p = .002), but differences were also dependent on the function/position of participants. Subordinates (M = 2.99) systematically assessed reported lower levels of transformational leadership than their superiors (M = 3.33) did (F (502) = 6.4, p = .012).

Similarly, the relationships between demographic and occupational variables and self-efficacy were examined. No differences emerged for sex and position concerning self-efficacy, however, small, significant correlations could be found with respect to tenure (r = .12).

Test of Hypotheses: Transformational Leadership and Its Dimensions
Regarding the correlations of the subscales of transformational leadership and occupational self-efficacy, none of them proved to be significant (see Table 3). Thus, none of the hypotheses (H1a to H1e) concerning the relationships between dimensions of transformational leadership and occupational self-efficacy could be seen as supported.

[148]
----
[149]

The correlation between transformational leadership and occupational self-efficacy is virtually zero (see Table 3). Thus, H2 (transformational leadership and self-efficacy are positively related) is not supported.

Table 3. Means, Standard Deviations and Correlation*s* for Occupational Self-Efficacy, Transformational Leadership

	Mean	Standard deviation	1	2	3	4	5	6	7	8
1. Self-efficacy[2]	3.79	.63								
2. Transformational leadership[3]	3.02	0.94	-.02[4]							
3. Idealized influence attributed	2.84	1.16	-.04	.93						

4. Idealized influence behavior	3.19	.97	-.02	.88	.74			
5. Inspirational motivation	3.19	.98	.01	.84	.69	.72		
6. Intellectual Stimulation	3.07	1.02	-.02	.91	.83	.76	.68	
7. Individualized Consideration	2.83	1.11	-.02	.91	.86	.74	.66	.81
8. Task Demands	3.71	.81	.24	.24	.24	.18	.20	.21	.26
9. Climate	3.55	.82	.33	.47	.47	.36	.37	.42	.49	.44

* p < .10, ** p < .05, *** p < .01

[149]
----
[150]

Test of Hypotheses: Transactional Leadership

Similarly, no significant correlations were found for transactional leadership (see Table 4). Thus, there is no support for the hypotheses concerning the subdimensions of transactional leadership (H3a and b).

Table 4. Means, Standard Deviations and Correlations for Occupational Self-Efficacy, Transactional Leadership

	Mean	Standard deviation	1	2	3	4
1. Self-efficacy	3.79	.63				
2. Contingent reward	3.16	.97	-.01			
3. Management by exception active	3.05	.80	-.03	.42		
4. Task Demands	3.71	.81	.24	.22	.01	
5. Climate	3.55	.82	.33	.44	.11	.44

* p < .10, ** p < .05, *** p < .01

Test of Hypotheses: Moderating Effects

In order to test moderating effects, multiple regressions were done. A combined measure of transformational leadership was used to test hypotheses 4 and 5. Table 5 shows the results of the multiple regression testing H4. The results support H4a indicating that there is a main effect for task demands on self-efficacy. The results also support H4b in so far as the interaction term becomes significant in the regression analysis.

[150]
----
[151]

Table 5. Regression Analysis with Task Demands

	B	Beta	R	R²
(Constant)	4.00		.29	.08
Sex	-.14	-.11**		
Tenure	.03	.04*		
Leader position	-.04	-.02		
Transformational leadership	-.05	-.08*		
Task demands	.20	.27***		
Transformational leadership * task demands	.07	.10**		

* p < .10, ** p < .05, *** p < .01

Figure 1 further clarifies the interaction effect between task demands and transformational leadership[5]. It becomes obvious from this figure that transformational leadership has a negative effect on self-efficacy in the case of low task demands. When task demands are higher, the effect nearly vanishes, indicating that transformational leadership has virtually no effect on self-efficacy in the case of high task demands. This result only partially supports H4b. As predicted, the relationship between transformational leadership and self-efficacy is virtually zero for participants with high task demands. Contrary to our hypothesis, however, the relationship between transformational leadership and self-efficacy is negative for participants with low task demands.

[151]
----
[152]

Figure 1. Interaction Effect Between Task Demands and Transformational Leadership

[152]

----

[153]

In order to further clarify the relationship between transformational leadership, self-efficacy, and climate, a second standard multiple regression was done. Table 6 presents the results of this regression. No significant main effect emerged for climate. H5a must therefore be rejected. The interaction between climate and transformational leadership is significant. The positive value indicates that transformational leadership has a higher influence on self-efficacy the better the climate. This result supports H5b.

Table 6. Regression with Climate

	B	Beta	R	R²
(Constant)	4.11		.18	.03
Sex	-.12	-.09*		
Tenure	.04	.05		
Leader position	-.15	.-07		
Transformational leadership	-.03	-.05		
Climate	.06	.08		
Transformational leadership * climate	.09	.12**		

* p < .10; ** p < .05; *** p < .01

Figure 2 further clarifies the interaction effect between climate and transformational leadership. As can be seen, the influence of transformational leadership on self-efficacy is negative when the climate is low / bad. It is positive when the climate is high / good. This result only partially supports H5b as we did not hypothesize that there is a negative relationship between transformational leadership and self-efficacy for participants evaluating the climate as low.

[153]
----
[154]

Figure 2. Interaction Effect Between Climate and Transformational Leadership

[154]
----
[155]

SUMMARY AND DISCUSSION

The study presented here focuses on the relationship between transformational leadership and occupational self-efficacy. The study is an extension of a study carried out by Schyns (2001a), taking into account the subdimensions of transformational leadership and transactional leadership. In addition, moderating effects of task and climate were hypothesized and tested.

Contrary to the hypotheses, none of the correlations – neither those of the subscales of transformational leadership nor those of the subscales of transactional leadership and occupational self-efficacy – turned out to be significant.

From the theory and research on transformational leadership and self-efficacy, contradictory

hypotheses could be construed: namely, that both constructs correlate positively (indicating that either transformational leaders enhance subordinates' self-efficacy or subordinates with high self-efficacy tend to perceive transformational leadership) or that both constructs correlate negatively (indicating that subordinates with low self-efficacy tend to perceive transformational leadership). Empirical results hint at a positive relationship between transformational leadership and self-efficacy (e.g. Schyns, 2001a). The question must therefore be posed as to why these results could not be replicated in our study? One possible explanation could be the characteristics of the sample. While Schyns (2001a) used a heterogeneous sample, we used a sample drawn from one organization. This organization was an administrative one. It could be assumed that in administrations, leadership is not as important as in other organizations because formal rules take over many tasks usually taken on by leaders (Felfe & Goihl, 2002b). For example, the tasks might be more clearly defined in administrative organizations than in production or service organizations. Thus, a leader need not assign and explain tasks to his / her subordinates.

Interestingly, the correlations between transactional leadership and occupational self-efficacy are also virtually zero. We expected positive relationships for contingent reward and negative relationships for management by exception active. In the case of contingent reward, a similar interpretation as the one given above for transformational leadership could be valid: In administrative samples, rewards connected with tasks might not be so important, as tasks may be rewarding in and of themselves.

For management by exception active, we expected a negative relationship with occupational self-efficacy, as the aspect of control might undermine employees' self-efficacy beliefs. The correlation found is virtually zero. This again suggests that leadership might not be very important in the sample we used here.

[155]
----
[156]

The correlation between task demands and occupational self-efficacy is positive. This could be expected from theory and research. According to Bandura (1977), mastery experience is one of the factors influencing self-efficacy and, in this sample, task demands are, in fact, positively related to occupational self-efficacy (Schyns, 2001b, found the same result in a sample of low qualified employees). Task demands therefore appear to play a more important role here than leadership.

The moderating effects of task and climate were tested using a multiple regression analysis. Due to high intercorrelations between the transformational subscales and occupational self-efficacy, a combined measure of transformational leadership was used in this analysis. The results indicate that the effect of transformational leadership on self-efficacy is negative for low task demands. We could interpret this finding as suggesting that transformational leadership – using visions to articulate goals – might be asking too much of employees in the case of low task demands. In fact, for employees with low task demands, these visions might be more of a threat than a challenge, resulting in the situation where transformational leaders diminish employee self-efficacy. Another explanation for this phenomenon could be found in the "weak" subordinates prefer high transformational leaders" hypothesis. Subordinates with low job demands also develop a lower level of self-efficacy. These subordinates (with low self-efficacy) may simply

experience their leaders as less critical and more transformational.

On the other hand, transformational leadership does not have an effect on self-efficacy for employees with high task demands. As these employees experience mastery in highly demanding tasks, their self-efficacy is gained from the task itself. Transformational leadership then simply becomes less important.

The relationship between task and leadership style is the main topic in contingency theory (e.g. Fiedler, 1967; Ayman, Chemers, & Fiedler, 1998). In this theory, leadership effectiveness is dependent on the situational context and on leadership style. Our results show that these two factors interact in their impact on followers' self-efficacy. It can be assumed that self-efficacy in turn leads to higher performance of followers and thus higher leader effectiveness. It thus possible that self-efficacy serves as an intervening variable in contingent leadership models[6].

Climate is positively related to transformational leadership and to occupational self-efficacy. It is also positively related to the transactional leadership behaviors contingent reward and management by exception (active). These results can be interpreted as showing that leadership influences climate. This is highly reasonable as leaders are a part of the work group and as such add to the social climate (see also Schyns, 2001b).

[156]
----
[157]

Again, we tested an interaction effect. The results indicate that transformational leadership has different effects on self-efficacy depending on the climate. Given that the climate is bad, the relationship between transformational leadership and self-efficacy is negative. One explanation might be that a strong contrast between climate and leadership causes a kind of irritation that leads to insecurity.

A different effect is found for good climate. In this case, transformational leadership influences self-efficacy in a positive way. Thus, transformational leaders enhance their employees' self-efficacy when the climate is good.

With respect to the regression analyses, it has to be recognized that the variables considered here do not explain much of the variance of occupational self-efficacy. This is not surprising when keeping in mind how occupational self-efficacy develops. Occupational self-efficacy is not a state that is only influenced by temporary events (Schyns & von Collani, in press). Its development contains past experiences and can be regarded as socialized during an entire working life. Thus, the recent work surroundings (in this case task demands and climate), as well as present leadership, do not influence self-efficacy to a great extent.

The results suggest that the relationship between transformational leadership and self-efficacy is more complex than originally thought. In future research, moderators should be taken into account. As could be shown, working conditions such as task demands and climate are important moderators. Furthermore, our preliminary analyses indicated that demographic variables might exert some influence as well. To test the extent to which these variables improved the prediction of self-efficacy, length of employment, gender and function were included in the regression analysis. As could be expected, a better overall estimation could be achieved, but no substantial

changes occurred for the constructs focused upon in our research.

Another finding that drew our attention was discovered when, in addition to hypotheses testing, an analysis of individual departments was done. The relationship between self-efficacy and transformational leadership varied between departments from .19 to -.30, although no significant differences concerning task demands and climate could be found between departments. Interestingly, the department with a negative correlation yielded the highest level of transformational leadership and vice versa - the department low in transformational leadership exhibited a positive correlation. There are likely still undetected determinants that explain the examined relationship.

[157]
----
[158]

ENDNOTES

1. We wish to thank Herbert Matschinger for his endless patience in discussions on the statistical analysis. We also want to thank the editor of CRISP, Lisa Troyer, and two anonymous reviewers for their helpful comments on this article.

2. The mean of self-efficacy was 4.71 (SD = .71) in the study carried out by Schyns (2001a).

3. The mean of transformational leadership was 3.53 (SD = .80) in the study carried out by Schyns (2001a).

4. The relationship between transformational leadership and self-efficacy was r = .21 in Schyns' study (2001a).

5. The unstandardized predicted values of self-efficacy are those predicted by the regression which included transformational leadership and task demands. The same is true for figure 2.

6. We thank an anonymous reviewer for the hint to the contingency theory.

REFERENCES

Ayman, R., Chemers, M. M., & Fiedler, F. 1998. "The contingency model of leadership effectiveness: Its levels of analysis." In F. Dansereau & F. J. Yammarino (Eds.), *Leadership: The multiple-level approaches - Part A: Classical and New Wave (pp. 73-95)*. Stamford, Conencticut: Jai Press..

Bandura, A. 1977. "Self-efficacy: Toward a unifying theory of behavioral change". *Psychological Review, 84*: 191-215.

Bandura, A. 1982. "Self-efficacy mechanism in human agency." *American Psychologist, 37:* 122-147.

Bandura, A. 1997. *Self-efficacy: The exercise of control*. New York: Freeman.

Bass, B. M. 1985. *Leadership and performance beyond expectations*. New York: The Free Press.

[158]
----
[159]

Bass, B. M. & Avolio, B. 1990. *Transformational leadership development: Manual for the Multifactor Leadership Questionnaire*. Palo Alto, CA: Consulting Psychologist Press.

Bass, B. M. & Avolio, B. 1993. "Transformational leadership: A response to critiques." In: M. M. Chemers & R. Ayman (Eds.) *Leadership theory and research – Perspectives and directions (p. 49-80)*. San Diego: Academic Press.

Bass, B. M. & Avolio, B. 1995. *MLQ Multifactor Leadership Questionnaire*. Technical Report. Redwood City CA.: Mind Garden.

De Vries, R. E., Roe, R. A. & Taillieu, T. C. B. 1999. "On charisma and need for leadership." *European Journal of Work and Organizational Psychology, 8*: 109-133.

Eden, D. 1990. *Pygmalion in Management.* Lexington: Lexington Books.

Ehrhart, M. G. & Klein, K. J. 2001. "Predicting followers' preferences for charsimatic leadership: The influence of follower values and personality." *Leadership Quarterly, 12*: 153-179.

Felfe, J. Resetka, H.-J. & Liepmann, D. 1994. *Skalen zur Organisationsdiagnose (Scales for organizational diagnosis)*. FU-Berlin.

Felfe, J. & Goihl, K. 2002a. "Deutsche überarbeitete und ergänzte Version des „Multifactor Leadership Questionnaire" (MLQ) (German revised and supplemented version of the Multifactor Leadership Questionnaire) . In A. Glöckner-Rist (Ed.). *ZUMA-Informationssystem. Elektronisches Handbuch sozialwissenschaftlicher Erhebungsinstrumente. Version 5.00.* Mannheim: Zentrum für Umfragen, Methoden und Analysen.

Felfe, J. & Goihl, K. 2002b. "Transformational Leadership and Commitment in different organizational contexts." In J. Felfe (Ed.). *Organizational Development and Leadership*. Frankfurt am Main: Peter Lang.

[159]
----
[160]

Fiedler, F. E. (1967). *A theory of leadership effectiveness.* New York: McGraw-Hill.

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.

Hater, J. J. & Bass, B. M. 1988. "Superiors' evaluations and subordinates' perceptions of transformational and transactional leadership." *Journal of Applied Psychology, 73:* 695-702.

House, R. J. 1977. A 1976. "Theory of charismatic leadership." In: J.G. Hunt & L.L. Larson (Eds.). *Leadership: The Cutting Edge*. Carbondale: Southern Illinois University Press.

House, R. J., and Shamir, B. 1993. "Towards the integration of transformational, charismatic, and visionary theories." In M. M. Chemers, and R. Ayman (Eds.). *Leadership theory and research: Perspectives and direction (pp. 81-107)*. San Diego, CA: Academic Press.

Keller, T. 1999. "Images of the familiar: Individuell differences and implicit leadership theories." *Leadership Quarterly, 10*: 589-607.

Kirkpatrick, S. S. & Locke, E. A. (1996). "Direct and indirect effects of three core charismatic leadership components on performance and attitudes." *Journal of Applied Psychology, 81:* 36 – 51.

Klein, K. J. & House, R. J. 1998. "On fire: Charismatic leadership and levels of analysis." In F. Dansereau & F. J. Yammarino (Eds.), *Leadership: The multiple-level approaches - Part B: Contemporary and Alternative (pp. 3-22)*. Stamford, Conencticut: Jai Press.

Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. 1996. "Effectiveness correlates of transformation and transactional leadership: A meta-analytic review of the MLQ literature." *Leadership Quarterly, 7:* 385-425.

[160]
----
[161]

Podsakoff, P. M., MacKenzie, S. B. & Bommer, W. H. 1996. "Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors." *Journal of Management, 22*: 259-298.

Schyns, B. 2001a. "Self-Monitoring and Occupational Self-Efficacy of Employees and Their Relation to Perceived Transformational Leadership." *Current Research in Social Psychology, 7*: 30-42 [http://www.uiowa.edu/~grpproc].

Schyns, B. 2001b. *Determinanten beruflicher Veränderungsbereitschaft bei Arbeitnehmern und Arbeitnehmerinnen unterer Hierarchiestufen (Determinants of Willingness for an Occupational Change of Employees on Low Levels of Hierarchy)*. University of Leipzig, Germany: Dissertation [http://www.uni-leipzig.de/~apsycho/dissertation.pdf]

Schyns, B. & Collani, G. v. in press. "A New Occupational Self-Efficacy and its Relation to Personality Constructs and Organisational Variables." *European Journal of Work and Organizational Psychology.*

Shamir, B., House, R. J., & Arthur, M. B. 1993. "The Motivational Effects of Charismatic Leadership: A Self-Concept based Theory." *Organization Science, 4:* 577 - 594.

Sutton, C. D. & Woodman, R. W. 1989. "Pygmalion goes to work: The effect of supervisor expectations in a retail setting." *Journal of Applied Psychology, 74*: 943-950.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Boston: Allyn and Bacon.

Tichy, N. M. & Devanna, M. A. 1986. "The transformational leader." *Training & Development Journal, 40:* 27-32.

Webster, M. & Sobieszek, B. I. 1974. "Sources of Evaluations and Expectation States." In: J. Berger, T. L. Conner, & M. H. Fisek (Eds.), *Expectation States Theory: A Theoretical Research Program (pp. 115-158).* Cambridge, MA: Winthrop.

[161]
----
[162]

AUTHORS' BIOGRAPHIES

Jörg Felfe (j.felfe@psych.uni-halle.de) is assistant at the University of Halle, Institute of Psychology. His main research interests are leadership (especially transformational leadership), organizational commitment, personnel selection, and evaluation of vocational trainings.

Birgit Schyns (bschyns@rz.uni-leipzig.de) is assistant at the University of Leipzig, Institute of Applied Psychology. Main research interests are leadership with special focus on followers' perception, self-fulfilling prophecies in leadership interaction, as well as self-efficacy, and organizational change processes.

[162]
----
[163]