Effects of and Influences on Transformational Leadership Development

By

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To my parents,

the first leading persons in my life
and the persons
who always helped me to transform
into the person
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III. ABSTRACT

The training program evaluated in the two present studies (N = 33 and N = 41) teaches managers in transformational leadership behavior. It consisted of a two-day group-based workshop introducing the concept of transformational leadership followed by two, respectively, four two-day follow-up sessions at intervals of three month including peer-based team coachings and 360-degree feedback. By employing a pretest-posttest control-group design these studies assess the effects of the training program on perception of transformational leadership, on followers' organizational commitment, followers' organizational citizenship behavior and on performance appraisals by supervisors. The application of a non-equivalent dependent variable design (Cook & Campbell, 1979) compares the trained variables (transformational leadership) with the untrained variables (transactional leadership). Additionally, influences of leaders' self-monitoring and emotional intelligence on the effectiveness of training were investigated. Analyses of variance revealed significant effects of the training on perception of leaders' transformational leadership and on performance appraisals of supervisors. Whereas leaders of the intervention group improved in the trained variable transformational leadership, they did not improve in the untrained variable transactional leadership. In addition, good to excellent effect sizes regarding transformational leadership, followers' organizational citizenship behavior and performance appraisals by supervisors appeared as a result of training. Applications of psychological utility analyses estimate positive return on investment for both studies. Results for the assumed moderators self-monitoring and emotional intelligence were inconsistent. A discussion of the results includes an evaluation of research as well as theoretical and practical implications, limitations, and directions for future research.

1. Brief Introduction

Leadership is one of the world's oldest phenomena. Regardless of geography, culture, or age, it occurs in all groups of people. In organizations, leadership often plays a critical role as one of the major drivers of a company's success (Bass, 1990b). For instance, executive leadership can account for up to 45 percent of an organization's performance (Day & Lord, 1988). As such, researchers and organizational managers are increasingly interested in leadership improvement. However, there exist only few summative evaluations of leadership development programs, as longitudinal designs appear to be complex and extensive. Furthermore, most of research on transformational leadership was conducted as single-shot studies. Only a small portion of the literature on transformational leadership reports of studies using longitudinal or experimental designs. An additional challenging obstacle is to convince the management of companies to cooperate with scientists by mandating universities to develop and evaluate their leaders' behavior. Consequently, the present study provides one of the rare and overdue longitudinal investigations of leadership development.

Among the leadership theories in organizational research, transformational leadership has captured scholars' interest most over the past decade (Judge, Woolf, Hurst & Livingston, 2006). As leadership development in general, transformational leadership development in specific has rarely been examined. Furthermore, little is known about influence of leaders' personal traits on the improvement of leadership. Hence, the goal of this manuscript is to provide more insights into the effects of and influences on the transformational leadership development by training and coaching.

The present work addresses several innovative considerations regarding transformational leadership development. First, the research is conducted within two German samples. The concept of transformational leadership is developed and well investigated in the North American context. Few studies have examined transformational leadership in Germany. Thus, the present piece of research expands our knowledge about the possibility to train transformational leadership behavior in cultures other than the North American one.

Second, the present work aims to provide more insights regarding transformational leadership where it commonly emerges: in civilian companies of the private sector. Results of student or military samples cannot easily be transferred into organizational

settings, as they lack external validity. Thus, the two conducted studies use commercial samples to investigate the development of transformational leadership behavior.

Third, most of the research on leadership is characterized by samples dominated by male leaders. The present investigation is one of the rare studies on leadership conducted on samples not dominated by male leaders. Thus, the actual study broadens our knowledge about the enhancement of transformational leadership when gender is more balanced.

Fourth, the current investigation evaluates the longevity of training effects. In the majority of cases, research designs regarding transformational leadership are single shot investigations. Up to date, evaluations of transformational leadership trainings detect changes after a day or after six months. The present work addresses the lack of longitudinal studies. Actually, it is the first evaluation of transformational leadership development investigating effects after twelve months, respectively nine months.

Fifth, innovative criteria such as followers' organizational citizenship behavior as well as supervisors' performance appraisals are considered as outcomes. Organizational citizenship behavior is voluntary behavior of dedicated employees that promotes the effective functioning of the organization. The present study is the first to investigate followers' organizational citizenship behavior and, furthermore, supervisors' performance appraisals as effects of transformational leadership training. At this juncture, effects on several levels of the leader's environment are explored: the levels of supervisors as well as of followers are considered. Additionally, effects on the perception of leadership style and on followers' organizational commitment are investigated in order to replicate findings of former studies on American samples (Barling, Weber & Kelloway, 1996; Kelloway, Barling & Helleur, 2000). Thereby, the present work aims to provide a summative evaluation (Scriven, 1972) of a transformational leadership program by assessing its effectiveness.

Sixth, some potential moderators are taken into account, as the mechanisms through which transformational leadership may be developed are yet unclear. Leaders who are able to regulate their self-presentation and their emotions are expected to benefit more from leadership training than leaders who show less pronounced ability for self regulation. Thereby, the present work additionally provides a formative evaluation (Scriven, 1972) by identifying influences that might optimize the effectiveness of the program.

Seventh, the present research is advanced for its additional usage of unequivalent dependent variable design (Cook & Campbell, 1979). Generally, summative evaluations of trainings make use of control group designs. However, placebo effects cannot be excluded in these designs. Participants of the intervention group might perform better after training only because they received some kind of treatment. The additional use of an unequivalent dependent variable design, respectively internal referencing strategy (Haccoun & Hamtiaux, 1994), controls for placebo effects in training evaluations. To the author's knowledge, there exist to date no evaluations of transformational leadership training that investigate effects of training by the use of both: a control group design and an unequivalent dependent variable design. Especially when research designs are affected by small sample sizes as it is traditionally the fact in research on training, explanatory power is reduced and the application of internal references appears to be useful.

Finally, the present work is the first examination of transformational leadership development that additionally provides utility analyses in order to verify the return on investment. Generally, summative training evaluations report only F-statistics and effect sizes. However, these analyses do not consider costs and time that are invested by companies. Psychological utility analyses estimate the effectiveness of training in monetary entities considering invested costs. The estimate of the return on investment offers a pragmatic and innovative method to assess and express the value of a training program.

In summary, the purpose of this dissertation is to investigate the effectiveness of transformational leadership development and to illuminate how leaders' traits can moderate the effectiveness of leadership training. The empirical evaluation of the transformational leadership development program will be central. It is hypothesized that this investigation will reveal evidence supporting the general hypothesis that transformational leadership development can be effective in enhancing transformational leadership behavior, followers' attitudes and performance appraisals by supervisors. Furthermore, it is hypothesized that leaders who are able to regulate their self-presentation and their emotions benefit more from leadership training than leaders who are less able to regulate themselves. The manuscript will end with a discussion of the obtained results, their integration into the theoretical and practical background, and finally with the limitations and recommendation for future research.

2. Theoretical Background

In order to provide the reader with the theoretical background of the present work, this chapter will introduce the relevant concepts and present accordant empirical research. First, this chapter starts with a brief definition of leadership and a short review of research on leadership. However, this work will not focus on providing an extensive discussion of the origins and evolution of the transformational leadership paradigm, which appears in a number of other sources (Avolio, 1999; Bass, 1995; 1998). The brief review is followed by the introduction of the concept of transformational leadership and its framework Full Range of Leadership Theory. Additionaly, metholodogical and demographic issues relevant for research on transformational leadership and the impact of culture on the emergence of transformational leadership are taken into account.

Second, empirical research on the development of transformational leadership is presented. Two approaches are differentiated: group-based training and feedback processes such as coaching. Third, three possible effects of transformational leadership development are presented: Perception of transformational leadership behavior, subordinates' attitudes and supervisors' performance appraisals.

Finally, this chapter introduces two stable dispositions of leaders as possible influences on the effectiveness of leader's development. Self-monitoring as well as emotional intelligence of the leader are considered as possible moderators for the effectiveness of transformational leadership training (see figure 1).

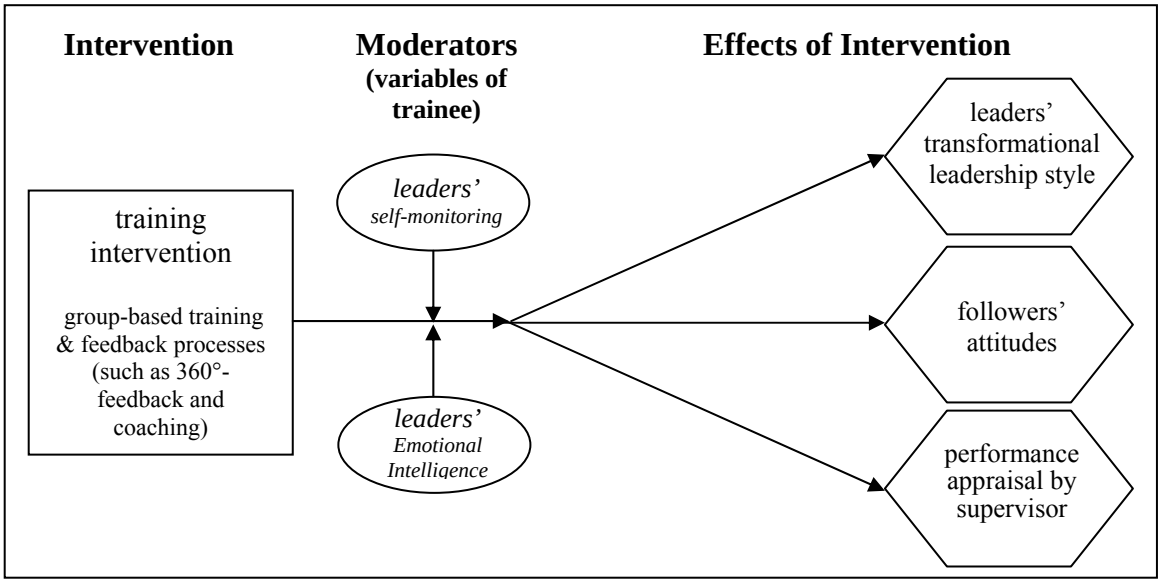


Figure 1: Overview of the Work Model with the Examined Variables

2.1. Introduction Into Leadership

Leadership has been studied by social scientists for much of the 20th century (Yukl, 2006). Although there are many definitions of leadership, none of them is universally agreed-upon (Bass, 1990a). So far, researchers commonly agree upon[1] the definition of organizational leadership which determinates leadership as „*the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organizations of which they are member*" (House & Javidan, 2004, p.15). Thus, leadership is defined as an ability of an individual, that can be observed within the context of an organization. Some aspects of this definition reflect influences of leadership research history, which will be presented in the following section.

Throughout the research periods dealing with leadership, Bryman (1992) identified four trends of leadership research history. Although his rough classification does not claim to provide an all-embracing overview of the history of leadership theories, it offers a short overview of some main developments in leadership research, which still have an impact on recent leadership theories.

Firstly, Bryman (1992) mentions the *Trait Approach*. Up to the late 1940s, the Trait Approach treated leadership as an innate trait. Researches proposed that leaders were born, not made. Accordingly, a person was expected to possess a set of certain traits to be identified as a leader. However, the basic premise of the Trait Approach could not be supported consistently (Stogdill, 1948). Although, the focus of leadership research shifted afterwards from leader traits to leader behavior, leader traits still play an important part in the area of leadership trainings (Heinitz, 2006).

Secondly, up to the late 1960s, the Trait Approach was followed by the *Style Approach*, which viewed leadership effectiveness as dependent on the leader's behavior (also known as Behavioral Approach, e.g. Yukl, 2002). A leadership style describes a constant situational invariant behavioral pattern. Accordingly, leadership is experienced as a 'style' when perceived by the subordinate. In contrast, leadership behavior varies according to the situation (Staehle, 1999). Researches of the Style Approach assumed that leaders could be trained in their behavior to be successfull leaders. This assumption is still present in recent theories. With regard to the above definition of leadership, leadership is still seen as the ability to behave in a certain way. However, even the Style Approach could not obtain consistent results. Therefore, the factor 'situation' became

[1] For instance, this definition was adopted by the GLOBE project (see footnote [3]).

more important.

Thirdly, Bryman (1992) mentions the *Contingency Approach* from the late 1960s up to the early 1980s. This approach proposed that the effectiveness of a certain leadership style is situationally contingent. A leadership style is seen as effective in some situations but not in others, assuming that there is not one universally adequate leadership style. Furthermore, the influence of situations is still recognized in recent leadership theories as moderating influences such as context often are considered when leadership is examined. Accordingly, the above definition of organizational leadership integrates the context of the organization.

Finally, Brymann (1992) labels the approach since the early 1980s as *New Leadership*. Including transformational (Bass, 1985) and charismatic[2] leadership (Conger & Kanungo, 1988). Theories of this approach arose with the growing interest in the re-engineering of organizations and the accompanying promotion of change and development in individuals and organizations (Heinitz, 2006). Accordingly, researchers try to identify leadership behavior that initiates and supports the various essential transformations in organizations. This focus accounts for the phrase *ability of an individual to influence,* and *motivate* in the leadership definition above.

New Leadership theories appear to make an important contribution to our understanding of leadership processes. Firstly, they provide an explanation for the exceptional influence some leaders have on subordinates, which could not adequately be explained by earlier theories such as situational leadership. Secondly, the New Leadership theories emphasize the importance of emotional reactions of subordinates to leaders, whereas the earlier theories emphasized more rational aspects of leader-follower interaction. The new theories also acknowledge the role of the leader in making events meaningful for subordinates. Eventually, the New Leadership theories include a more comprehensive set of variables (traits, behavior, situational context) and provide a more integrative perspective on effective leadership than the earlier theories (Yukl, 2002).

Scientific findings clearly indicate that transformational leadership is highly

[2] Although the present study focuses on transformational leadership theory, some findings of the related concept of charismatic leadership are recognized as well as both constructs can be seen as distinct but overlapping approaches (Yukl, 2002; Rowold & Heinitz, 2007). In fact, some researchers (Judge & Piccolo, 2004) detected no significant difference in the overall validities of charismatic versus transformational leadership.

effective in influencing several attitudes that motivate subordinates, such as satisfaction with the leader (DeGroot, Kiker & Cross, 2000; Dumdum, Lowe & Avolio, 2002; Fuller, Patterson, Hester & Stringer, 1996; Judge & Piccolo, 2004; Lowe, Kroek & Sivasubramaniam, 1996). To date, five meta-analyses provide correlations between transformational leadership and criteria of interest to organizational behavior research. Table 1 provides an overview of the correlations with some of the criteria.

Table 1: Meta-Analytic Findings Regarding Correlations Between Criteria and Transformational Leadership

	Study:	Lowe, Krock, & Sivasubra-maniam (1996)	Fuller, Patterson, Hester, & Stringer (1996)	DeGroot, Kiker, & Cross (2000)	Dumdum, Lowe, & Avolio (2002)	Judge & Piccolo, (2004)
	K of studies	39	19	36	49	87
1.	Leader's effectiveness	.60 to . 71	.78	.74	.50	
2.	Leader's performance		.45			
3.	Subordinates' satisfaction with leader		.80		.40	
4.	Subordinates' Commitment			.43		
5.	Subordinates' effectiveness			.31		
6.	Subordinates' extra-effort			.73		
7.	Subordinates' job satisfaction			.77		.71
8.	Team Performance					.60

Note: Study of Fuller et al. (1996) provides correlations with the transformational leadership scale Idealized Influence only.

Among the leadership theories that are provided by scientific literature, transformational leadership takes a prominent place (Heinitz, 2006). In all 61 countries participating in the GLOBE[3] project, *Charismatic Based Leadership* such as

[3] GLOBE (Global Leadership and Organizational Behavior Effectiveness) was a project linking culture and leadership. It focused mostly on quantitative analyses of data from 61 countries. Leadership dimensions observed were Participative Leadership, Charismatic Leadership, Team Oriented Leadership, Humane Oriented Leadership, Autonomous Leadership and Self-Protective Leadership.

transformational leadership was perceived as clearly facilitating outstanding leadership (Brodbeck & Frese, 2007). With regard to the suggested effectiveness and to the attributed importance of this construct of leadership, the present study focuses on transformational leadership.

2.1.1. Transformational Leadership

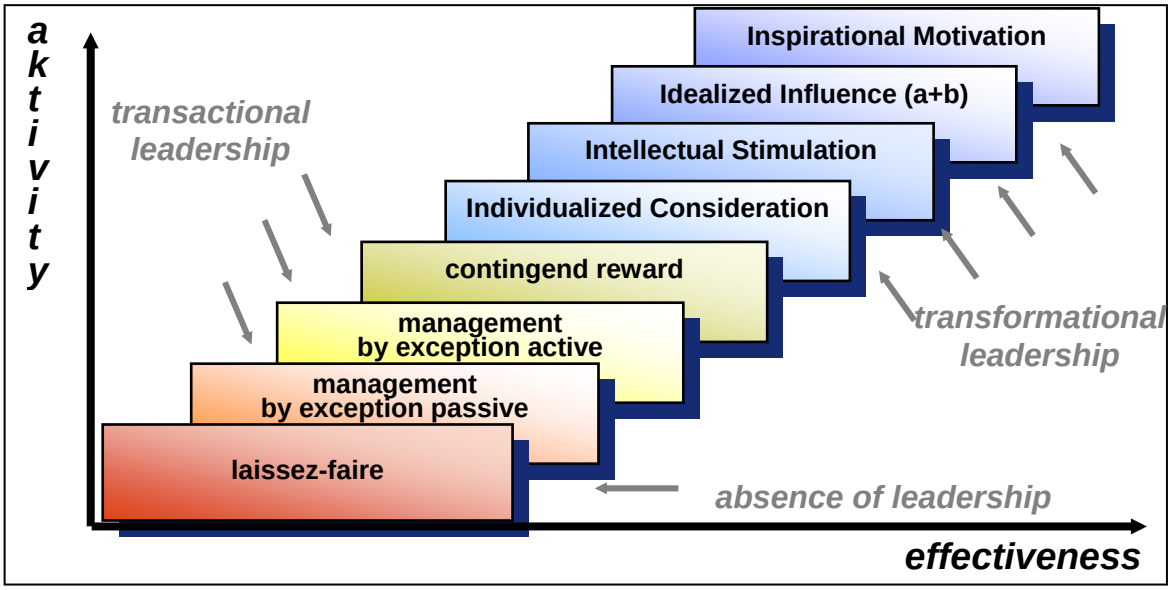
The starting point of transformational leadership was Burns' (1978) book on political leaders. His qualitative analysis of several political leaders' biographies revealed two leadership styles, that he named *transactional* and *transformational leadership*. While transactional leaders exchange rewards contingent upon certain achievements, transformational leaders motivate their subordinates through a shared and attractive vision of the future and inspire followers by elevating their social consciousness (Burns, 1978). According to Burns (1978), the two leadership styles are exclusive as two poles of a continuum. As a consequence, a person either leads transactional or transformational.

Contrary to Burns' conceptualization of a continuum, Bass (1985) proposed both leadership styles as complementary constructs and transferred them to an organizational context. Accordingly, transformational leadership is built upon transactional leadership (Bass, Avolio & Goodheim, 1987). Furthermore, Bass and his colleague Avolio (1991) developed the *Full Range of Leadership Theory*, which consists of transactional, transformational leadership and the absence of leadership, namely, laissez-faire style (see figure 2). These three typologies of leadership behavior are represented by nine distinct factors, which are generally measured by the Multifactor Leadership Questionnaire (MLQ). The next section extensively deals with the Full Range of Leadership Theory (Bass & Avolio, 1991; 1994).

2.1.2. Full Range of Leadership Theory

Bass and Avolio (Bass & Avolio, 1990a) set out to identify a leadership theory that comprises the full range of leadership. Therefore, the Full Range of Leadership Theory implies that leaders show all leadership styles (transactional, transformational, laissez-faire) only varying individually in frequencies (Bass & Avolio, 1990a).

According to Bass and Avolio (1994), these styles are arranged on a vertical axis measuring effectiveness (ineffective to effective) and a horizontal axis measuring involvement (passive to active). Figure 2 shows that transformational leadership styles largely fall into the effective and active quadrant of the model while laissez-faire and transactional leadership styles tend to fall into the ineffective and passive quadrant (Judge et al., 2006).



Note: The transformational leadership styles are arranged staged only for aesthetic reasons. They are all effective and active in almost the same manner.
Figure 2: Full Range of Leadership Model

Laissez-faire style

Laissez-faire style is characterized by a leader who simply avoids leadership responsibilities. It is considered to be the most ineffective leadership style in the Full Range of Leadership model. Therefore, it is not seen as a transactional leadership style (Judge & Piccolo, 2004).

Transactional leadership

Bass' transactional leadership construct incorporates three separate facets: In the case of *management by exception passive* leaders only interfere when problems occur or become serious (Bass & Avolio, 1993a). Only in this case, does the passive manager take corrective action. *Management by exception active* appears when leaders monitor subordinates' performance in order to correct them when necessary (Bass & Avolio, 1994). *Contingent reward* describes a leader who assigns agreements on what needs to be done and rewards subordinates in exchange for the desired accomplishments (Avolio, 1999).

The transactional leader is characterized as one who works within an existing system or culture, and tends to avoid risks, pays attention to time constraints and efficiency and is most likely to be effective in stable and predictable environments (Bass, 1985). Indeed, leaders of public organizations are perceived by their subordinates as practicing significantly more frequent management by exception behavior than leaders in private organizations (Dumdum et al., 2002; Lowe et al., 1996).

Transformational leadership

Bass' transformational leadership construct consists of four separate dimensions: *Inspirational Motivation* is demonstrated when a leader articulates an inspiring vision that can be shared by the followers. Bass (1985) predicts followers of transformational leaders to develop autonomy within the overlay to such a leader's vision. Thus, true transformational leadership requires employee empowerment – not employee dependence. Leaders high in *Individualized Consideration* recognize and consider the individual differences in abilities, needs and goals of subordinates. In order to develop their followers, they provide continuous feedback and coaching. *Intellectual Stimulation* characterizes a leader who is able to view a problem from different perspectives. By questioning old assumptions and encouraging innovation, a transformational leader stimulates the creativity of followers intellectually. Finally, *Idealized Influence* stands for a leader who serves as a charismatic role model to subordinates. In the commonly used questionnaire, the MLQ, this dimension is further divided into an attributed facet (*Idealized Influence attributed*) and a behavioral facet (*Idealized Influence behavioral*) of Idealized Influence.

According to Bass (1997), transformational leadership is effective in all situations and cultures. However, transformational leadership is more likely to occur if the

structure is more flexible than bureaucratic (Bass, 1998), if the hierarchical level is rather high than low (Bass & Avolio, 1993b), and if the culture is entrepreneurial (Yukl, 2002). Public institutions are often thought to function within a more bureaucratic framework that may serve to suppress the impact of a transformational leadership style (Bass, 1985). Contrary to these expectations, transformational leadership behaviors are more commonly observed in public organizations than in private organizations (Lowe et al., 1996).

The augmentation hypothesis of Bass (1985), namely that transformational leadership generates enhanced levels of subordinates' effort and performance beyond what transactional processes do, has been confirmed in several studies. Evidence collected in organizations has shown that actually extra-effort and satisfaction among followers are generally higher when leaders are rated by their followers or colleagues as more transformational (Bass & Avolio, 1990b; Bycio, Hackett & Allen, 1995; Hater & Bass, 1988; Howell & Avolio, 1993; Kirkpatrick & Locke, 1996).

In conclusion, transformational leadership appears to be more effective than transactional leadership. It has a stronger effect on criteria such as subordinates' satisfaction, willingness to extra-effort and leaders' effectiveness. Consequently, the present studies' aim is to research on the development of transformational leadership in dissociation from the enhancement of transactional leadership.

2.1.3. Methodological and Demographic Issues

Beside the confirmed effectiveness of transformational leadership, meta-analyses also revealed some moderators that should be considered in research of transformational leadership. First, as several authors (Fuller et al., 1996; Lowe et al., 1996) acknowledge, measuring effectiveness of the leader with the scales embedded in the MLQ may bias the relation between transformational leadership and the outcomes. The version MLQ 5X Short (Bass & Avolio, 1995) provides three additional scales to measure some of these attitudinal consequences of transformational leadership. Originally constructed by Bass in 1985, the scales allow the assessment of subordinates' extra-effort, leader's effectiveness and satisfaction with the leader. This common source measurement has widely been used in the research of transformational leadership. However, leadership effectiveness measured with the MLQ scales is associated with higher correlations, suggesting artefacts due to common method variance.

The second notable moderator of the correlations appears to be the source of ratings. Single-source measurements (only followers vs. only leaders) result in higher correlations (r = .48, see Fuller et al. 1996) compared to multi-source measurements (evaluations by supervisors and followers), which lead to lower relationships (r = .34, see Fuller et al., 1996). Researchers suggest the usage of multiple sources to prevent this same-source bias (DeGroot et al., 2000; Fuller et al., 1996).

As a third moderator, context, specifically the type of organization, influences the relationship between leadership style and leader's effectiveness. Correlations in the context of civilian organizations are lower than in military or university settings (see Fuller et al., 1996). Furthermore, correlations in private organizations are lower than in public settings (Lowe et al., 1996).

Fourth, several researchers view gender as a variable of importance in examining leadership emergence (Eagly, 1987; Eagly & Johnson, 1990)[4]. A meta-analysis of 45 studies revealed that female leaders are more likely to exhibit transformational leadership behaviors as well as contingent reward behaviors than male leaders (Antonakis, Avolio & Sivasubramaniam, 2003; Eagly, Johannesen-Schmidt & van Engen, 2003). Furthermore, male leaders are generally more likely than female leaders to exhibit management by exception active, management by exception passive and laissez-faire behavior. Although the average difference is quite small (d = -.10), these gender differences were significant on all measures except for one subscale of transformational leadership (Idealized Influence behavioral). While women tend to be somewhat more transformational than their male counterparts, this is to some degree accompanied by greater satisfaction and rated effectiveness according to both male and female subordinates (Bass, 1999b). Interestingly, the majority of the organizations studied has been dominated by male leaders. Thus, Bass (1999b) called for examinations where the majority of participants are women.

[4] Some literature reviews of the 1980s and 1990s regarding leadership styles and gender concluded that female leaders, in general, are perceived as more understanding, helpful, empathetic, socially sensitive, cooperative, and emotionally expressive than male leaders (Eagly, 1987; Eagly & Johnson, 1990), whereas men are generally viewed as more independent, masterful, assertive, and competent (Eagly, 1987). In contrast to these stereotypes in literature, empirical investigations revealed no differences in gender and leadership style, when leadership was conceptualized as authorian compared to democratic or task-oriented compared to relations-oriented (Bartol, 1978; Bartol & Butterfield, 1976; Eagly & Johnson, 1990; Eagly & Karau, 1991). However, some researchers (Eagly & Karau, 1991) found that gender differences depend on the type of leadership measured.

With regard to the moderators, the present study will make use of multiple methods (measuring dependent variables with measures not embedded in the MLQ, using online assessment as well as paper-pencil questionnaires), multiple sources (several perspectives) and investigate effects of training intervention within the context of civilian organizations. Consequently, lower correlations than in military or university samples are expected. In regard to Bass' claim for research on women leaders (Bass, 1999b), data of this study has been collected in organizations not dominated by males.

2.1.4. Transformational Leadership in Germany

The concept of transformational leadership is a genuine American one (Felfe, Tartler & Liepmann, 2004). Consequently, the transformational leadership framework is well established in the North American context and has been examined in several hundred American studies. However, Bass (1997) assumed that the transformational paradigm transcends national boundaries and that the effects of transformational leadership are universal across cultures. Some research supports this assertion (Den Hartog, House, Hanges & Ruiz-Quintanilla, 1999; Walumbwa, Bani, Wang & Lawler, 2005), while other findings partially contradict this claim (e.g. Zagorsek, 2004). However, results show some differences between German and American leadership that can be explained by cultural differences.

Among the frameworks of studying international culture, that of Hofstede (1980) has been the most popular. He published a study of some 116 000 IBM employees in forty countries and used factor-analytic techniques to find four dimensions of culture related to work organizations: *Power Distance*[5] (PDI), *Individualism*[6] (IDV), *Masculinity*[7] (MAS) and *Uncertainty Avoidance*[8] (UAI). Later, Hofstede and Bond (1984) added a fifth dimension, *Long-Term Orientation*[9] (LTO). Although the

[5] Power Distance Index (PDI): The degree to which the less powerful members of a collective accept and expect power to be distributed unequally.

[6] Individualism (IDV): Individualism versus Collectivism. The extent to which individuals are supposed to look after themselves or remain integrated into groups, usually around the family.

[7] Masculinity (MAS): Masculinity versus its opposite, Femininity refers to the distribution of roles between the genders. The assertive pole has been called 'masculine' and the modest, caring pole 'feminine'. The women in feminine countries have the same modest, caring values as the men; in the masculine countries they are somewhat assertive and competitive, but not as much as the men, so that these countries show a gap between men's values and women's values.

[8] Uncertainty Avoicance (UAI): The extent to which a collective tolerates uncertainty and ambiguity. The basic problem involved is the degree to which a society tries to control the uncontrollable.

[9] Long Term Orientation (LTO): Long Term Orientation versus Short Term Orientation refers to the extent to which a culture programs its members to accept delayed gratification of their material, social, and emotional needs.

American and the German culture belong to the same group of cultures, Hofstede (2001) revealed differences between these two cultures on three of his five cultural dimensions[10] (see figure 3). Compared to the United States, Germany ($UAI_{Germany} = 65$) shows higher ratings in Uncertainty Avoidance than the United States ($UAI_{USA} = 46$). Thus, Germans rely more on rules and institutionalized procedures to reduce stress and anxiety when facing ambiguity and uncertainty than Americans. In addition, Hofstede (2001) found lower ratings in Power Distance and Individualism for the German sample compared to the American culture. Hence, less powerful members of German organizations and institutions ($PDI_{Germany} = 35$) tend neither to accept nor expect that power is distributed unequally whereas members of American organizations do more so ($PDI_{USA} = 40$). Although Germany ($IDV_{Germany} = 67$) belongs to the individualistic cultures, Germans are less individualistic than Americans ($IDV_{USA} = 91$). In fact, the American culture scores highest on Individualism, meaning that the USA is a society in which the ties between individuals are extremely loose.

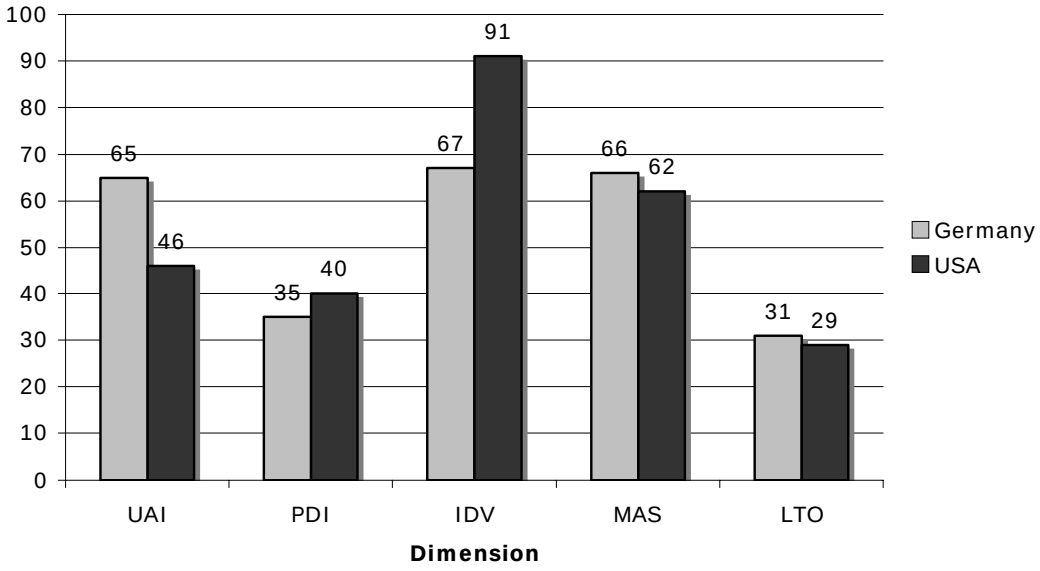


Figure 3: Hofstede's Culture Dimensions for the USA and Germany (Hofstede, 2001)

In the two remaining dimensions, Masculinity and Long Term Orientation, both cultures show no significant differences. Both cultures are characterized by high Masculinity ($MAS_{Germany} = 66$, $MAS_{USA} = 62$) and low Long Term Orientation ($LTO_{Germany} = 31$,

[10] Scores of the dimensions range from 0 to 100.

LTO_{USA} = 29). In the more masculine countries such as the USA and Germany, women are somewhat assertive and competitive, but not as much as the men. Americans and Germans prefer values associated with Short Term Orientation.

Brodbeck, Frese and Javidan (2002) present findings for a German sample based on a large-scale study conducted as part of the GLOBE program (see also Brodbeck & Frese, 2007). Similarly to Hofstede (2001), they found relatively high levels of Uncertainty Avoidance, Individualism and Masculinity combined with low levels of Power Distance and Long Term Orientation[11]. Additionally, Brodbeck et al. (2002) found that German cultural practices are characterized by high levels of *Assertiveness* along with low levels of *Humane Orientation*. High Assertiveness means that Germans are more confrontational in their interactions with others than members of most other cultures (Brodbeck et al., 2002). The language that people use in interpersonal interactions tends to be straightforward and stern. This characteristic also means that disputes and confrontational debates are acceptable approaches at work (Brodbeck & Frese, 2007). Human Orientation means the extent to which a society encourages individuals for being fair, helpful, generous, caring, and kind to others (Brodbeck et al, 2002). Thus, social interaction in German companies tends to be more task-oriented, straightforward, and less altruistic than in many other countries, whereas social responsibilities are anchored in the German social systems. The strong tendency to avoid uncertainty in people's lives may have encouraged the development of very elaborate institutionalized social systems that take care of people and reduce risks to individuals and institutions.

In summary, Germans prefer their lives to be structured, well organized and secure (Brodbeck et al., 2002) and tend to be less integrated into groups that would protect them in exchange for unquestioned loyalty. Furthermore, getting the task done, minimizing errors, and achieving high quality standards seem to be more important in Germany than compassion and interpersonal consideration (Brodbeck et al., 2002). Accordingly, several authors (Felfe et al., 2004; Kuchinke, 1999) expected to find transactional leadership in a higher level in Germany than in the United States. Finally, Germans are less future-oriented than people from other nationalities and prefer a low Power Distance. In regard to this, Felfe and colleagues (2004) assumed that it is harder to articulate inspiring long-term visions effectively in German organizations than in

[11] Please note that Brodbeck et al. (2002) named Long Term Orientation as Future Orientation.

American ones. In conclusion, transformational leadership was hypothesized to be at lower levels in Germany than in the United States (Felfe, 2003; Kuchinke, 1999).

In regard to the actual emergence of Full Range Leadership, there is some variation in the findings across countries. Contrary to expectations, Kuchinke (1999) found similar means in transactional leadership styles for German and American populations in a sample of 5400 employees of a multinational telecommunication organization with sites in New Jersey, Ohio and Nuremberg (Germany). With regard to transformational leadership, the populations in the United States and Germany differed in the dimensions Idealized Influence and Inspirational Motivation. As expected, American employees reported a greater frequency of leadership focused on vision, a desired future, optimism, and enthusiasm in its attainability (Kuchinke, 1999). Similarily, Felfe (2003) found lower means for the transformational scales and Contingent Reward. Furthermore, Felfe (2003) confirmed the expected higher means for the transactional scales management by exception active, management by exception passive and laissez-faire. Refering to management by exception active, the mean is even significantly higher in the German sample (Felfe et al., 2004).

The GLOBE research program (see Brodbeck, Frese & Javidan, 2002; Den Hartog et al., 1999) also provides supporting data. However, the GLOBE data cannot give direct evidence for actual prevalence rates of transformational leadership styles because the managers' ratings in the GLOBE questionnaire focused not on *actual leadership* but on *prototypes* of what makes for outstanding leadership (Brodbeck et al., 2002). Thus, findings do not show the actual emergence of leadership styles in various countries but they exhibit which leadership styles are seen as excellent in several cultures. Even with regard to these prototypes of outstanding leadership, results show that Germany ranks below the median of all countries of the GLOBE program on transformational leadership (Brodbeck et al., 2002). From this, it follows that Germans rank transformational leadership not as high as people from other cultures even though they evaluate transformational leadership as most outstanding leadership of all leadership styles.

Although there is some variation in findings across several countries, in general, the results support the importance of transformational leadership across cultures (Den Hartog et al., 1999; Felfe et al., 2004). However, there exist some differences between

American and German leadership. Therefore, there is still much to be learned about the generalizability across cultures (Judge et al., 2006). There already exist some examinations of the development of transformational leadership, most of them in North American samples. With regard to only one piece of research on the development of charisma in Germany (Frese, Beimel & Schoenborn, 2003) and one on the development of managers investigating transformational leadership in Switzerland (Rowold, 2008), research on German samples is still warranted.

The present project was initiated to address this gap in literature. Accordingly, the present study aims to investigate transformational leadership behavior and its development through training and coaching within the German culture.

2.2. Developing Transformational Leadership

Although there is some evidence that good leaders are born (Johnson, Vernon & Harris, 2004) this does not necessarily mean that good leaders cannot be made (Judge et al., 2006). Transformational leadership theory is purported to be a behavioral theory of the New Leadership Approach and a central assumption is that transformational behaviors can be learned (Bass, 1990b; 1998; Bass & Avolio, 1990a). Some evidence already attests to the utility of the development of transformational leadership (Bass, 1999a) and will be presented in this section.

Bass (1990b) initially recommended two different methods to develop transformational leadership. One method emphasizes training or workshop setting (see 2.2.1.) whereas the other method relates to individual feedback processes such as coaching with a counselor (see 2.2.2.). By participating in a workshop with other leaders, participants can share their experiences, learn from each other and practice transformational leadership behavior via role-play. The focus of this method lies more on the acquisition of general knowledge and on practice of behavior that is generally effective, whereas individual feedback processes focus more on the individual accomodation of the specific behavior, which is effective in the actual situation of the participant.

2.2.1. Improving Transformational Leadership by Group-Based Training

There is some evidence that transformational leadership can be developed through group-based training interventions (Barling et al., 1996; Dvir, Eden, Avolio & Shamir, 2002; Frese et al., 2003; Kelloway et al., 2000). However, these experimental research designs are still rare and are restrained by several limitations.

An evaluation of training in a military context was provided by Dvir, Eden, Avolio and Shamir (2002). They tested the impact of transformational leadership, enhanced by training, on followers' development and performance. In a longitudinal field experiment, 32 military leaders received three days of transformational leadership training and a three-hour booster session six weeks later (intervention group), whereas 22 military leaders were exposed to a three day eclectic leadership training (control group).

Findings revealed that leaders who participated in the transformational leadership training were perceived as more transformational than leaders who participated in the

eclectic leadership training (Dvir et al., 2002). Further results indicate that the leaders in the experimental group had a more positive impact on direct followers' development and on indirect followers' performance than did leaders in the control group. Looking closer, the significant effects on the developmental variables of direct followers are intriguing. Whereas variables of the control group declined, these variables remained stable in the experimental group. Presumably, transformational leadership appear to prevent decline in some of these variables.

Although this study is noteworthy for its use of a control group, the researchers admit some limitations of their study. As all participants in the study were men, replications with mixed-gender are needed. Furthermore, the booster session was offered only to the experimental group. This fact raises the possibility of Hawthorne effect. Finally, the findings may also not be appropriate to generalize to civilian contexts. According to Fuller and his colleagues (1996), military participants as student participants had a significantly higher relationship with performance than civilian worker participants in their meta-analytic findings and therefore, should not be portrayed as generalizing to civilian contexts. This is also to be considered in the study by Towler (2003) on a student sample (see also table 2).

Table 2: Research on Development of Transformational Leadership within Military or Student Samples

Author	*Sample*	*Method*	*Design*	*Effects*
Dvir, Eden, Avolio, & Shamir, 2002	54 platoon leaders	training trans-formational leadership	pretest posttest design (6 months) with control group	transformational leadership, followers development, performance
Towler, 2003	41 business school students	charismatic training vs. presentation skills training vs. no training	pretest posttest design (1 week) with control group	leader's declarative knowledge, exhibition of charismatic behavior in a videotaped speech, followers' performance

Towler (2003) investigated the effectiveness of charismatic influence training within a student sample (N = 41). Participants of the control group (N = 13) received no training whereas the other participants received either charismatic influence training (N = 14) or presentation skills training (N = 14). Charismatic influence trainees performed better on a declarative knowledge test on charismatic communication and exhibited more charismatic behaviors a week after the training intervention than those

in the other conditions. Furthermore, simulated subordinates who viewed a charismatic influence trainee performed best on writing a quality letter. However, several findings were not significant. Furthermore, the study was limited by a small sample and a short time frame. Finally, the research was limited by the use of an artificial task and setting. Thus, the following research findings focus on examinations within civilian samples (table 3).

Table 3: Research on Development of Transformational Leadership within Civilian Samples

Research on transformational leadership trainings				
Author	*Sample*	*Method*	*Design*	*Effects*
Barling, Weber, & Kelloway, 1996	20 bank branch managers	training trans-formational leadership and feedback	pre-test post-test design (5 months) with control group	perceived transformational leadership, commitment, financial performance
Frese, Beimel, & Schoenborn, 2003	25 managers (Study I), 22 managers (Study II)	action training inspirational communication	pre-test post-test design (1 day), non-equivalent dependent variable design, no control group	charismatic communication in a speech
Research on development of transformational leadership by feedback processes[12]				
Author	*Sample*	*Method*	*Design*	*Effects*
Kelloway, Barling, & Helleur, 2000	40 health care managers	training trans-formational leadership and feedback vs. only training trans-formational leadership vs. only feedback	pre-test post-test design (6 months) with control group	perceived transformational leadership
Rowold, 2008	28 managers	management development program with peer-based team coaching	pre-test post-test design (18 months) with control group	transformational leadership, performance appraisal

A study within a civilian context focused on the enforcement of visionary communication by a group-based training intervention in two German samples (Frese et al., 2003). By using a *non-equivalent dependent variable design* (Cook & Campbell,

[12] The studies by Kelloway, Barling, & Helleur (2000) and Rowold (2008) are further described in the section 2.2.2.

1979), the researchers compared trained behavior (charismatic communication) with behaviors that were not trained (public speech) before and after the training intervention and renounced a control group. They expected only the trained behavior to improve at the second day of training. In the first study, 25 midlevel managers of a modern mobile phone provider (two of them women) participated in one of three management trainings. The participants were videotaped when they gave an inspirational speech at the beginning of the training. The vision of the speech was discussed and modifications were suggested by the trainer and the participants. After receiving lectures on charismatic leadership and on the principles of a good vision, the leaders were asked to role-play the improved visionary speech in front of the other participants again at the second day of the training. Trained raters coded the videotapes of both speeches. In the second study, 22 midlevel managers of a German construction company (four women) participated in two separate management courses with the same content as in the first study. Findings of the two studies suggest that, as expected, the training was successful. Participants of both studies displayed improvements in the trained variables than in the control variables. However, the design of this study did not allow controlling for history, maturation, and regression effects (Campbell & Stanley, 1963) as a true control group design was not used. Furthermore, the longevity of the effects is still undiscovered.

Some rare evaluations of the effects of transformational leadership training have been reported within civilian contexts that make use of a control group (Barling et al., 1996; Kelloway et al., 2000). All are characterized by relatively small sample sizes. Barling, Weber and Kelloway (1996) assessed the effects of transformational leadership training in a pretest-posttest control-group design on 20 bank branch managers in Canada. They used subordinates' perception of leadership behavior, subordinates' organizational commitment and subordinates' financial performance as outcome criteria to assess the effectiveness of training in transformational leadership. The training intervention included not only a one-day group-based training session[13] to introduce the concept of transformational leadership but also four individual booster sessions. In the

[13] The Workshop of Barling et al. (1996) is similar to the Training Full Range Leadership (Bass & Avolio, 1999). Common activities as brainstorming on effective and ineffective leadership behavior, role-play and development of specific action plans for implementing transformational leadership were included.

first individual session, participants received a feedback report based on data from self-report and subordinates questionnaires. On the basis of these reports, managers developed personal action plans, which were considered and eventually modified in the three following booster sessions. The focus of the training intervention was mainly on Intellectual Stimulation and, to a smaller degree, on Individualized Consideration behaviors as charismatic behaviors (such as Idealized Influence and Inspirational Motivation) are more difficult to change. The results of the study suggest the effectiveness of the transformational leadership training. Findings demonstrated effects on the managers' Intellectual Stimulation in particular. Compared to leaders of the no-training control group, participants of the training intervention were perceived to exhibit more Intellectual Stimulation, Individual Consideration, and charismatic behaviors after training in ratings by their subordinates. Furthermore, subordinates of managers receiving training exerted significant increases in organizational commitment whereas subordinates of leaders in the no-training group did not change their organizational commitment. Although the limited sample size used for the analysis of financial outcome diminished the chance to obtain significant findings, branches whose leaders participated in the training reported better financial outcomes than those in the no-training group five months after the initial training. Thus, the effects were in the expected direction and significant for the personal loan sales and marginally significant for the credit card sales.

Several points, however, remain unclear: Firstly, as training mainly focused on Intellectual Stimulation behaviors, research is needed on effects of the other transformational leadership behaviors. It is possible that changing different aspects of transformational leadership will have differential effects on outcome variables (Kelloway et al., 2000). Secondly, we need to know which other variables might be affected by enhanced transformational leadership in addition to followers' affective commitment and followers' financial performance (e.g. followers' organizational citizenship behavior). Thirdly, Barling et al. (1996) call for investigations on whether the benefits are maintained over a longer period of time (more than five months). Further, research should focus on identifying more precisely when significant effects can be expected to emerge. In addition, research should focus on other contexts than within the financial sector. Finally, Barling et al. (1996) ask for research that contrasts the role of group-based training programs with the individual-based booster sessions

and analyze their unique effects. This aspect is addressed by a study of Kelloway, Barling, and Helleur (2000) and will be presented in the next section.

2.2.2. Improving Transformational Leadership by Coaching

Additionally to participation with other leaders in a workshop, Bass (1990b) points out a second method for the development of transformational leadership. This second method relies on individual feedback processes and goal setting. A counsellor gives a leader a standardized description of his or her transformational and transactional leadership performance as rated by the leader himself/herself as well as by the leader's subordinates or colleagues. MLQ feedback reports are used to draw leader's attention to discrepancies in the perception of leadership style. Discussing the results, the leader and counsellor find ways to improve ratings by goal setting. In contrast to the training approach, feedback processes help participants to identify individual strengths and weaknesses. On the basis of this knowledge, participants can use this individualized information to systematically improve their behavior.

Although this individual feedback process in addition to the workshop was already evaluated within the research design of Barling et al. (1996), its incremental use for the effectiveness of training remained in question. Consequently, Kelloway, Barling, and Helleur (2000) assessed the unique effects of counselling and of leadership training on subordinates' perceptions of transformational leadership six months after the intervention. With regard to Bass (1990b) two recommended methods, the researchers differentiated leadership training and leadership counselling in order to detect interactive or additive effects of the methods. Furthermore, they replicated the findings of Barling, Weber and Kelloway (1996) in their field experiment on 40 leaders of a health care corporation in Canada. Eight leaders received no training or counselling, ten leaders received individual counselling, whereas another group of ten leaders received one-day transformational leadership training and the fourth group of twelve leaders received training and additional individual counselling. Post-intervention data revealed that leaders who participated in the training were rated as displaying significantly more transformational leadership than those who did not participate in the training. However, leaders who participated in feedback sessions were also rated higher than those who did not receive feedback. Finally, those who received training, feedback or both were rated significantly higher than leaders in the control group. Thus, results suggest that training and individual feedback may be interchangeable to some extent, as the combination of

both methods did not lead to higher ratings of transformational leadership than either intervention alone.

Two points, however, limit the research results: firstly, the sample size is again quite small considering the number of participants within the four groups. Secondly, the study relied on single-source data that led to higher correlations due to a same-source bias (DeGroot et al., 2000; Fuller et al., 1996).

With regard to the high expenses of individual coaching caused by high personal costs, it is important to consider other forms of feedback processes. A feedback process that has become quite popular for the development of leaders is managerial coaching (Offermanns & Steinhübel, 2006). In Germany, coaching is used for the counselling of top managers since 1985 (Rauen, 2003). A coach in the organizational context provides independent and neutral feedback to the manager. Furthermore, an organizational coach helps the leader finding new solutions for challenges, which are individually adapted to the situation of the manager (Mönninghoff, 2008). Ninety percent of German organizations make use of coaching to develop managers more or less regularly (Lippmann, 2006). There exist various forms of coaching. Whereas individual coaching refers to the counselling of one manager by an external coach in the workplace, team coaching appears when the coach counsels more than one person at a session. This method offers several perspectives and experiences to the participants as group members provide insights and help each other.

Rowold (2008) evaluated a general management development program, which included a method of team coaching (Lippmann, 2005; Rowold & Rowold, 2008). Over the time of 18 months, participants counselled each other in five of the eight development program sessions by peer-based team coaching[14]. Twenty-eight male managers of an industrial company in Switzerland completed self-ratings on the MLQ 5X (Bass & Avolio, 2000; Rowold, 2004) and were rated by supervisors and followers. Furthermore, managers and their supervisors completed a subjective performance measurement. Seventeen managers participated in the management development program (intervention group) whereas eleven leaders did not participate in the program but provided data (control group). Findings suggest that supervisors perceive a marginal significant improvement of transformational leadership behavior and management

[14] Peer-based team coaching is further described in 3.1.3

performance after training. Contrary to expectations, subordinates ratings declined after training.

Four points, however, limit the research results: first, the sample size is again quite small. Second, only men participated in the program. Third, the investigated program did not aim to enhance transformational leadership in specific but, instead, aimed to maintain general management skills. Finally, data of the control group could not be obtained for all variables resulting in limitations for statistical analyses.

With regard to research on transformational leadership development, some rare research findings suggest that training and feedback processes such as coaching have positive effects on transformational leadership. With regard to utility, group-based training suggests to be a more cost-effective means of intervention to enhance transformational leadership (Kelloway et al., 2000). Consequently, the present study focuses on group-based interventions to develop transformational leadership behaviors. As the method of peer-based team coaching is not only group-based but also focuses on feedback processes, this method is obtained in the research design. Furthermore, an utility analysis is provided in chapter four to calculate the return on investment of the evaluated leadership program.

Recapitualting aspects, which still remain in question, several considerations regarding transformational leadership development, are addressed in the present study. First, as research on civilian samples appears to be more needed, the present piece of research is conducted within two civilian samples. Second, with regard to Bass' claim for research on female leaders, the present study uses samples not dominated by male leaders. Third, the present investigation evaluates the longevity of training effects by assessing changes over the period of twelve months, respectively nine months. Fourth, as the mechanisms through which changes are obtained still remain unclear (Kelloway et al., 2000) some potential moderators are taken into account (see section 2.4). Finally, beside the perception of leadership styles, criteria such as followers' organizational citizenship behavior and organizational commitment as well as supervisors' performance appraisals are considered as outcomes (see also 2.3). All these outcome variables will be introduced in the following section.

2.3. Effects of Transformational Leadership

Research of the last decades revealed that transformational leadership has important effects on criteria of interest to organizational behavior researchers (Judge et al., 2006). Accordingly, it is assumed that some of these criteria are affected if transformational leadership training enhances transformational leadership behavior. Consequently, effects of the changed behavior after the training intervention at the workplace are examined.

As in the research study of Barling et al. (1996), effects on the perceived leadership styles and effects on followers' organizational commitment are investigated. In addition to these outcome variables, this study examines effects on followers' organizational citizenship behavior as well as supervisors' performance appraisals. Relevant findings with regard to these criteria are presented in this section.

2.4.1. Effects on Perception of Leadership Style

Bass (1985) reasoned that transformational leaders may have a positive influence on several levels of their environment. In regard to this assumption, the perspective of self, subordinates, supervisors as well as peers regarding the perceived leadership behavior is a subject of interest and was examined in several studies by the use of the MLQ (Felfe et al., 2004; Harris & Schaubroeck, 1988; Hetland & Sandal, 2003; Tartler, Goihl, Kroeger & Felfe, 2003).

Most intriguing are the findings regarding self-ratings compared to other-ratings of leadership behavior. According to a meta-analysis by Harris and Schaubroeck (1988), self-ratings correlate much less with peers' (r = .36) or supervisors' (r = .35) ratings than peers' and supervisors' ratings correlate with each other (r = .62). Several authors found self-ratings to be less valid due to a self-serving bias (Harris & Schaubroeck, 1988; Mabe & West, 1982; Taylor & Brown, 1988). Given this work, self-ratings as compared to other-ratings of leaders were expected to be less likely associated with criteria and performance ratings (Bass & Yammarino, 1991). In fact, self-ratings of leadership behavior failed to correlate with performance, whereas subordinates' ratings were associated with the external cirteria (Bass & Yammarino, 1991).

Results of an intercultural study (Atwater, Waldman, Ostroff, Robie & Johnson, 2005) indicated that the effect of self- and other-ratings in the prediction of performance differs between the United States and European countries (United Kingdom, Germany,

France, Denmark, Italy). In Germany, subordinates' ratings were significantly related to performance in a linear manner. However, for peers' ratings, a nonlinear relationship with performance was observed such that performance ratings drop off steeply as peers' ratings become progressively lower. Beyond, the relationship between self-ratings and performance was not significantly related in countries other than the United States. Thus, the most important perspective is that of the followers.

Additionally, there seems to be further cultural impact on rating differences. Felfe and his colleagues (2004) report that differences between self- and other-ratings are much lower in an American sample than in their German data (Felfe et al., 2004). Whereas German and American self-ratings are on a similar level, the German other-ratings are on a lower level (Felfe, 2003; Kroeger & Tartler, 2002). Thus, German subordinates rate more conservatively. In conclusion, self-other agreement is important for the United States while other ratings are most important in European countries but generally lower in German samples.

All in all, other-ratings are the more important source of information by determining leadership behavior. As this study also determines effects on subordinates' attitudes (see 2.4.2.) and supervisors' performance appraisals (see 2.4.3), ratings from subordinates and supervisors will be observed separately. Whereas self-ratings alone might not serve much purpose to evaluation of actual behavior, they can add to an understanding of criteria of job performance when they are combined with other-ratings (Bass & Yammarino, 1991; Tartler et al., 2003). Simultaneous consideration of both self and other-ratings is important for examining relationships with performance measures (Atwater et al., 2005). Consequently, the present study includes ratings from all perspectives (leaders themselves as well as ratings from subordinates, peers and supervisors) to detect changes in perception of leadership behavior after the training intervention.

H1: The training intervention has a positive influence on the transformational leadership behavior of the participants such that subordinates (H1a), supervisors (H1b) and raters from all perspectives (self, supervisors, subordinates, peers) (H1c) perceive an increased display of participants' transformational leadership behavior after the participants have attended the training intervention.

With regard to the research design of Frese et al. (2003), the present study will also make use of the non-equivalent dependent variable design (Cook & Campbell, 1979) and compare the trained variables (transformational leadership style) with behaviors that were not trained (transactional leadership styles). It is expected that the training intervention has a positive influence on the transformational leadership styles but not on the transactional styles.

H2: The training intervention has no positive influence on the transactional leadership behavior of the participants such that subordinates (H2a), supervisors (H2b) and raters from all perspectives (self, supervisors, subordinates, peers) (H2c) perceive no improvement in the display of participants' transactional leadership behavior after the participants have attended the training intervention.

2.4.2. Effects on Followers' Attitudes

A large proportion of contemporary leadership research focused on effects of transformational leadership on subordinates' work-related attitudes such as organizational commitment or organizational citizenship behavior (Podsakoff, MacKenzie, Moormann & Fetter, 1990). Both concepts are integrated in the present work and will be presented in the following.

Organizational Commitment

Commitment is stated to be the potentially most outstanding consequence of transformational leadership (DeGroot et al., 2000). Mowday, Porter and Steers (1982) focus on organizational commitment (OC) as an attitude. When individuals consider the extent to which their own values and goals are congruent with those of the organization, they form their OC. Thus, Mowday et al. (1982) define OC

> „... as the relative strength of an individual's identification with and involvement in a particular organization. Conceptually, it can be characterized by at least three factors: (a) a strong belief in and acceptance of the organization's goals and values; (b) a willingness to exert considerable effort on behalf of the organization; and (c) a strong desire to maintain in the organization" (p. 27).

Meyer and Allen (1984) initially proposed that a distinction should be made between affective and continuance commitment (also known as calculatory commitment). *Affective organizational commitment* (OCa) is associated with an emotional attachment to an organization through such feelings as loyalty, affection, and belonging, whereas *continuance organizational commitment* (OCc) denotes the perceived costs associated with leaving the organization. Later, Allen and Meyer (1990) suggested a third distinguishable component, namely, *normative organizational commitment* (OCn), which stands for the feelings of obligation to stay in the organization. Allen and Meyer (1990) made the assumption that all three forms of

commitment could appear at the same time and in different degrees. Each of the three components has different effects on employees' behavior in the organization. A meta-analysis (Meyer, Stanley, Herscovitch & Topolnytsky, 2002) confirmed that OCa has the strongest positive correlation with job satisfaction (r = .65), job performance (r = .16), and organizational citizenship behavior (r = .32), followed by OCn. OCc is unrelated or negatively related to these positive work behaviors. Furthermore, these results suggest that all facets of this *Three-Component Model* (Meyer & Allen, 1991; 1997) correlated negatively with withdrawal cognition, turnover intention, and turnover. Consequently, this construct reflects a criterion of importance for organizational research.

Transformational leaders are proposed to influence followers' OC by encouraging subordinates to use novel approaches and by inspiring loyalty while recognizing and appreciating the different needs of each follower to develop his or her personal potential (Avolio, 1999; Bass & Avolio, 1994; Shamir, House & Arthur, 1993). As transformational leadership has been conceptually linked to OC, there is a growing body of research empirically examining the links between OC and transformational leadership (Avolio, Zhu, Koh & Bhatia, 2004; Bono & Judge, 2003; Dumdum et al., 2002; Walumbwa & Lawler, 2003). Several studies found that transformational leadership is positively associated with subordinates' OC, irrespective of the commitment measure used (Bycio et al., 1995; Koh, Steers & Terborg, 2005). Obtained correlations between transformational leadership and OC are summarized in table 4.

Bycio, Hackett and Allen (1995) were the first to investigate the relationship between transformational leadership and OC. As expected, they found significant associations between OCa and transformational leadership. Furthermore, the strong positive correlations between transformational leadership scales and OCa (.39 to .45) were significantly larger than those involving OCn (.14 to .17) or OCc (-.03 to -.05). Especially the leadership style Idealized Influence correlated highly with OCa (.45). These findings confirm the conjecture that transformational leadership raises OCa but not the other facets of commitment, which are less based on emotions (Bycio et al., 1995).

In the already stated research, Barling, Weber and Kelloway (1996) confirmed their surmise that training of transformational leadership not only enhances transformational leadership behavior but also exerts significant effects on subordinates' OC. After

training, the correlation between commitment of followers and perceived transformational leadership raised from r = -.05 to r = .15.

In Asia, Avolio, Zuh, Koh and Bhatia (2004) examined the mediating role of psychological empowerment and the moderating role of structural distance in the relationship between transformational leadership and organizational commitment. Using a sample of staff nurses in Singapore, the authors confirmed their assumptions about the mediator. In Germany, several studies (Felfe, 2005; 2006; Felfe & Goihl, 2002; Felfe et al., 2004) confirmed that transformational leadership has a positive impact on OCa.

Table 4: Intercorrelations between Transformational Leadership and Organizational Commitment

Study		r (OCa)	r (OCn)	r (OCc)	r (OC)
1	Bycio et al (1995)	.39 to .45	.14 to .17	-.03 to -.05	
2	Barling et al. (1996)				.15
3	Podsakoff, MacKenzie & Bommer (1996)				.20 to .34
4	DeGroot et al. (2000) *(meta-analysis)*				*(.43)*
5	Judge & Bono (2000)				.29 to .38
6	Meyer et al. (2002) *(meta-analysis)*	*(.46)*			
7	Dumdum et al. (2002) *(meta-analysis)*				*(.43)*
8	Walumbwa & Lawler (2003)				.41
9	Bono & Judge (2003)	.25			
10	Rafferty & Griffin (2004)	.25 to .34	.00 to.13		
11	Avolio et al. (2004)				.15 to .18
12	Walumbwa, Wang, Lawler & Shi (2004)	.42			
13	Whittington, Goodwin & Murray (2004)	.46			
14	Koh et al. (2005)				.42
15	Felfe (2006)	.26 to .35			

Note: OCa (affective organizational commitment), OCn (normative organizational commitment), OCc (continuance organizational commitment) refers to organizational commitment according to Allen & Meyer (1991). OC (overall organizational commitment) refers to organizational commitment according to Mowday et al. (1982). Intercorrelations in parentheses refer to results of meta-analyses.

Thus, this considerable body of research suggests that transformational leadership is positively associated with OC in a variety of organizational settings and cultures (Avolio et al., 2004; Bono & Judge, 2003; Dumdum et al., 2002; Koh et al., 2005; Walumbwa & Lawler, 2003). In the present study it is expected that OC of the subordinates will improve after leaders participated in the training intervention. As Barling and his colleagues (1996) measured only affective OC in their evaluation of

transformational leadership training, the study at hand aims not only to replicate their findings but also to provide more differentiated information. It is the first study that differentiates according to followers' OCa, OCn and OCc in a training design. With regard to correlations of prior research and the non-equivalent dependent variable design (Cook & Campbell, 1979), positive influences are expected only on OCa and OCn but not on OCc.

H3a/b: The training intervention has a positve influence on the participants such that they positively affect their subordinates' affective organizational commitment (H3a) *and their subordinates'* normative organizational commitment (H3b).

Thus, it is expected that subordinates will increase their OCa and their OCn after the participants attended the training intervention. However, it is further expected that subordiantes will not increase their OCc after the participants attended the training intervention.

H3c: The training intervention does not influence participants such that they positively affect their subordinates' continuance organizational commitment (H3c).

Organizational Citizenship Behavior

Organizational citizenship behavior (OCB) is a concept that means to reflect "extra-role" behavior. Even though the effects of transformational leadership on "in-role" performance (e.g., assigned performance) are important, they may not be as important as the effects of transformational leadership on "extra-role" behavior considering Bass' (1985) assumption that transformational leadership leads to performance beyond expectations within the followers. OCB refers to the individual contributions in the workplace that go beyond job-role requirements and contractually rewarded achievements (Organ & Ryan, 1995). The concept has been introduced in 1983 (Bateman & Organ, 1983; Smith, Organ & Near, 1983). Organ (1988) defined OCB as

> "… individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization.

> By discretionary, we mean that the behavior is not an enforceable requirement of the role or the job description, that is, the clearly specifiable terms of the person's employment contract with the organization; the behavior is rather a matter of personal choice, such that its omission is not generally understood as punishable" (p. 4).

Firstly, Smith, Organ and Near (1983) differentiate between two dimensions of OCB: a) *altruism* (to provide help to coworkers) and b) *compliance* (exemplary attendance, use of work time, respect for company). Later, Organ (1988) added three more facets c) *courtesy* (to prevent problems of work associates), d) *sportsmanship* (willingness to tolerate the inevitable inconveniences of work without complaining), and e) *civic virtue* (responsible involvement in the issues of organizations). These citizenship behaviors are considered as important components of job performance as they promote the effective functioning of the organization as a whole (Organ, 1988) and are part of the spontaneous and innovative behaviors which Katz and Kahn (1966) note to be instrumental for effective organizations.

With regard to antecedences of OCB, several studies examined the impact of transformational and transactional leadership behaviors on followers' OCB (MacKenzie, Podsakoff & Rich, 2001; Podsakoff et al., 1990; Podsakoff, MacKenzie & Bommer, 1996). Empirical findings support the assumption that transformational leadership behaviors correlate with subordinates' OCB (see table 5).

Podsakoff, and colleagues (1990) were the first to investigate the relationship between transformational leadership and OCB. They found positive correlations between the TLI[15] scales for transformational leadership and the five dimensions of OCB. Furthermore, results indicate that the effects of transformational leadership behaviors are mediated by followers' trust in their leaders.

[15] Podsakoff and colleagues (Podsakoff et al., 1990) used the *Transformational Leadership Inventory* (TLI, Podsakoff et al., 1990) as measure to detect transformational leadership behavior. The TLI provides a narrower assessment for the dimensions comprising the full-range model.

Table 5: Intercorrelations Between Transformational Leadership and Organizational Citizenship Behavior

		OCB	altruism	comliance	courtesy	sportsman-ship	civic virtue
1	Podsakoff et al. (1990)		.10 to .22	.15 to .27	.13 to .23	.09 to .26	.07 to .14
2	Deluga (1995)	.25 to .30					
3	Podsakoff et al. (1996)		.09 to .17	.08 to .19	.12 to .32	.11 to .21	.06 to .12
4	Goodwin, Wofford & Whittington (2001)	.21 to .28					
5	MacKenzie et al. (2001)		.20 to .29			.13 to .23	-.05 to .10
6	Six, Felfe, Schmook & Knorz (2001)	.18					
7	Wang, Law, Hackett, Wang & Chen (2005)	.18					
8	Koh et al. (2005)		.24	-.28 / .12			
9	Felfe (2006)	.17 to .22					

Positive relationships also emerge when transformational leadership is measured by the MLQ (Deluga, 1995; Goodwin, Wofford & Whittington, 2001). In Asia, Koh, Steers and Terborg (2005) investigated the impact of transformational behavior of school principals in Singapore on OCB of the teachers (rated by the principals). Although transformational leadership only had a significant impact on the prediction of one sub-facet of OCB (altruism) and failed to add significant variance to the prediction of the two remaining sub-facets of OCB (compliance 1, compliance 2), these findings suggest that transformational leadership behavior has a significant and substantial add-on effect to transactional leadership in the prediction of OCB. In addition, positive correlations were found in a Chinese sample (Wang, Law, Hackett, Wang & Chen, 2005). In Germany, Six et al. (2001) and Felfe (2006) found significant positive correlations between transformational leadership and OCB when measured by subordinate ratings, whereas there were no correlations between transactional as well as laissez-faire leadership behaviors and OCB, respectively.

In conclusion, these findings suggest that transformational leadership is positively associated with OCB in a variety of cultures. In this study it is expected that OCB of the subordinates will improve after their leaders participated in the training intervention.

H3d: The training intervention has a positive influence on the participants such that they positively affect their subordinates' organizational citizenship behavior.

2.4.3. Effects on Leaders' Performance Appraisals by Supervisors

The majority of studies investigating transformational leadership used effectiveness scales embedded in the MLQ 5X Short (Bass & Avolio, 1995) to evaluate the performance of the leader. However, several meta-analyses (Fuller et al., 1996; Lowe et al., 1996) questioned the appropriateness of this effectiveness criterion measure. Fuller (1996) found mean correlations of .45 between the transformational scale Idealized Influence and reported over-all performance of the leader. This relationship was significantly smaller when performance was measured with multi-source designs (r = .34) indicating that the operationalization of the criterion variable is a powerful moderator (Fuller et al., 1996).

In regard to these findings, the consideration of different measurements of leaders' effectiveness appears to be important. Judge and Bono (2000) stated that it would be useful to know whether transformational leadership behaviors result in supervisors evaluating the leader as more effective as these superiors are largely responsible for the development and promotion of their subordinates. Thus, those leaders who enact transformational behaviors early on will be promoted to broader leadership positions only if their superiors see them as effective. Only few studies investigated the relationship between transformational leadership behaviors and leaders' performance appraisals by supervisors (see table 6). It must be pointed out that two of these studies used the same sample in a military setting (see table 6).

Table 6: Intercorrelations Between Performance Appraisals and Transformational Leadership

study	Waldman, Bass & Einstein (1987)	Waldman, Bass & Yammarino (1990)	Yammarino, Spangler & Bass (1993)	Judge & Bono (2000)	Sosik & Megerian (1999)	Sosik, Potosky & Jung (2002)
sample size	256 managers	186 navy officers	186 navy officers	539 alumni of leadership programs	63 managers	64 managers
overall TFL		.38	.38		-.11	.05
II	.20			.23		
IC	.24					
IM				.24		
IS	.09					

Note: overall TFL (overall transformational leadership), II (Idealized Influence), IC (Individualized Consideration), IM (Inspirational Motivation), IS (Intellectual Stimulation). No correlations were available for the seventh research of Rowold (2008)

Waldman, Bass and Einstein (1987) were the first to examine the relationship between transformational leadership and performance appraisals within a civilian sample. Performance appraisal was obtained by the 13 ratings of the company's management by objectives program. A single index of performance was created by combining the overall performance ratings. Results of the study indicate that only aspects of transformational leadership were related to performance appraisal scores, whereas transactional leadership did not show a relationship to performance appraisals. Judge and Bono (2000) measured leaders' effectiveness with five items completed by the leaders' immediate supervisors and found positive correlations with transformational leadership.

Waldman, Bass and Yammarino (1990) examined the relationship between perceived transformational leadership behavior and leader's effectiveness in a military sample. In addition to the generally used MLQ effectiveness scales, performance data, which was collected annually from the time of an officer's commission by the United States Navy, was made available to the researchers in scores developed by the Navy Personnel Research and Development Center. Presumably using the data of Waldman et al. (1990), Yammarino, Spangler and Bass (1993) conducted an additional study on 186 United States Navy Officers who before have been graduates of the United States Naval Academy. Methodologically, their study outperformed the previous studies in that they also used longitudinal data. Findings suggested that military performance as midshipmen at the academy predicted officers' subsequent transformational leadership and officers' appraised performance[16] while on fleet assignment. Furthermore, officers' transformational leadership while on fleet duty predicted officers' appraised performance.

Sosik and Megerian (1999) found self-awareness of managers to be a moderator for the relationship between transformational leadership and managerial performance. Researchers used supervisors' evaluations on 14 dimensions of managerial practices such as motivating and inspiring, planning and organizing, and problem solving (see Yukl, 1994). Results indicate that correlations between leader behavior and performance varied as a function of self-awareness of managers. For those leaders categorized as self-aware, ratings of leader performance by both superiors (in terms of managerial effectiveness) and subordinates (in terms of MLQ effectiveness scales) were

[16] The performance appraisal consisted superiors' evaluations of each officer's performance. In detail, performance appraisals considered contributions to the unit's mission, including effective integration of personnel and the mission and completion of assigned tasks.

positively related to subordinate ratings of transformational leadership behavior. Again using the 14 dimensions of Yukl (1990; 1994), the study by Sosik, Potosky and Jung (2002) is further described in section 2.3.1. with regard to self-monitoring. Via PLS analysis, they found that transformational leadership was positively related to performance appraisals whereas transactional leadership and laissez-faire leadersip were negatively related to supervisors' performance appraisals.

A more recent study was provided by Rowold (2008). As already mentioned in chapter 2.2.1 (leadership development), Rowold (2008) measured leaders' managerial performance with a subjective performance scale that was developed on the basis of Conway's (1999) four factors of management performance: *technical-administrative task performance* such as being a good planner, *leadership task performance* such as motivating followers, *job dedication* such as being motivated even when difficulties appear, and *interpersonal facilitation* such as being sensitive with others. Conway (1999) identified these performance categories as relevant task performances and context performances (extra-role performance) for managerial jobs. Supervisors' ratings of leaders' managerial performance improved marginally after leaders underwent a management program.

In summary, these findings suggest that transformational leadership is positively associated with supervisors' performance appraisals. Furthermore, it is recommended to utilize effectiveness measures other than the effectiveness scales embedded in the MLQ. Thus, the present study also makes use of scales measuring Conway's managerial performance. It is expected that the performance appraisals of supervisors will improve after their leaders participated in the training intervention.

H4a: The training intervention has a positive influence on the participants such that their supervisors will perceive an improvement of their performance. Supervisors will enhance the performance appraisals of participants' job dedication (H4a), interpersonal facilities (H4b), technical-administrative task performance (H4c) *and* leadership task performance (H4d) *after the participants attended the training intervention.*

2.4. Influences on Transformational Leadership Development

Several researchers (Cannon-Bowers, Salas, Tannenbaum & Mathieu, 1995; Baldwin & Ford, 1988; Holton, 1996; Holton, 2005; Hochholdinger, Rowold & Schaper, 2008a) argue that the effectiveness of training interventions does not only depend on the methods of training (e.g. training with lectures, coaching) but also on moderators such as properties of the trainee (e.g. traits, motivation) or attributes of the context (e.g. culture of organization, public organizations vs. private organizations).

Regarding training methods, the body of research on the effectiveness is extensive (Arthur Jr, Bennett Jr, Edens & Bell, 2003). For example, the methods role-play (Prideux & Ford, 1987), behaviour modelling (Robertson, 1990) as well as goal setting (Locke & Latham, 1984; 1990; 2002) are well known for their effectiveness. Furthermore, findings support the effectiveness of organizational training (Arthur Jr et al., 2003) and feedback (Guzzo, Jette & Katzell, 1985). The two present studies are not designed to evaluate and compare different training procedures; however, several effective methods are used in the studies at hand and combined in the evaluated transformational leadership training program (see 3.1.3).

In terms of moderators[17], leadership research has extensively examined their role in research on leadership effectiveness (e.g. Howell, Dorfman & Kerr, 1986), with most of the moderators of the contextual type (see also section 2.1.3.). However, Murtha Kanfer & Ackerman (1996) propose that situational-dispositional traits influence specific behaviors and their effect on performance processes under certain circumstances. Thus, not only context variables can serve as moderators but also dispositional traits.

Taken together, although transformational leadership is stated to represent a behavioral theory of the New Leadership Approach, the components of transformational leadership can conceptually be related to personality traits. However, the impact of leaders' traits on the development of transformational leadership has rarely been examined and still remains unclear.

To address these gaps in scientific literature, the study at hand aims to examine the two dispositional traits self-monitoring and emotional intelligence as potential moderators for the effectiveness of transformational leadership training and coaching

[17] Moderator variables can be introduced when a relationship holds for one subpopulation but not for another (Baron & Kenny, 1986).

(see figure 4). Effectiveness of the training is measured by perception of leadership behavior, followers' OCB and leaders' performance appraisal by supervisor (see chapter 2.3). Thus, the present work aims to examine not only if the training is effective but also how and when the intervention is effective.

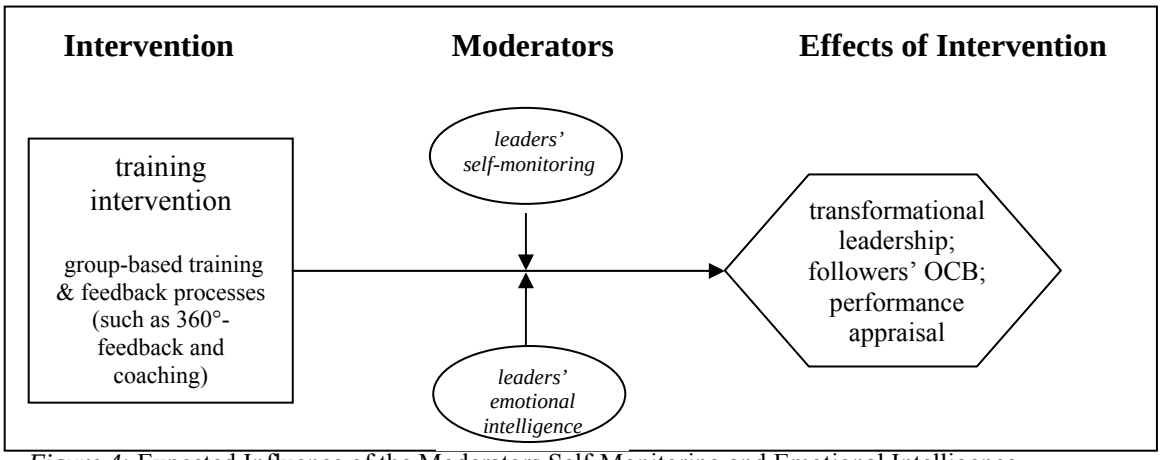


Figure 4: Expected Influence of the Moderators Self-Monitoring and Emotional Intelligence

2.3.1. Self-Monitoring of the Leader

Several researchers of transformational leadership focused on dispositional attributes and recognized the importance of self-regulating mechanisms such as self-monitoring for the emergence of transformational leadership behavior (e.g. Atwater & Yammarino, 1992; Gardner & Avolio, 1998; Sosik, Potosky & Jung, 2002; Sosik & Dinger, 2007). These studies support the ideas a) that transformational leaders can maximize their effectiveness by using self-presentation – a part of self-monitoring – to influence subordinates in a favourable way, and b) that transformational leaders benefit from adapting their leadership behavior to a variety of organizational requirements (Atwater & Yammarino, 1997; Carver & Scheier, 1985; Korman, 1976; Tsui & Ashford, 1994; Wood & Bandura, 1989). Thus, self-monitoring might help a manager to choose which leadership behaviors are appropriate.

The construct of self-monitoring (SM) is introduced by Snyder (Snyder, 1974; 1987) and is, generally, accepted as a relatively stable feature of personality (Snyder, 1987). It refers to an individual's ability of self-observation and self-presentation guided by situational cues about what is socially appropriate in a certain situation (Snyder, 1974; 1987). High self-monitors scan their environment and read social cues. This facet of SM

is referred to as *sensitivity*[18] (Lennox & Wolfe, 1984). Furthermore, high self-monitors adapt their behavior in regard to these social cues in order to appropriately match the particular situation in which they find themselves. As a consequence, their behavior is guided primarily by external cues such as group norms, roles, and other features of the social situation and to a lesser extent by an inner self of deeply held values and beliefs (Schwalbe, 1991). This second facet of SM is named *self-presentation* (Lennox & Wolfe, 1984). Conversely to high self-monitors, low self-monitors are less sensitive to social cues in their environment. Furthermore, they diagnose social cues quite inaccurately (Snyder, 1987). As a consequence, they do not adjust their behavior to match the appropriateness of the situation (Snyder, 1987). Accordingly, primarily internal features such as their attitudes, values or personality traits guide their behavior.

With regard to transformational leadership, being a high self-monitor may be more effective for a leader in accurately identifying followers' needs and values and regulating his/her own behavior to reflect a consistency with these needs and values (Sosik & Dinger, 2007). Actually, results of a study by Sosik and Dworakivsky (1998) confirm that SM is significantly positively related to ratings of transformational leadership (r = .11). Furthermore, Atwater and Yammarino (1992) found that transformational leaders with developed self-monitoring skills are superior performers in a military setting. Interestingly, Schyns (2001) intended to identify the SM of followers as an important mechanism in the transformational leader-follower relationship, but the correlations found were too small to confirm the assumption.

Three studies regarding SM indicate interesting implications for the development of transformational leadership. Firstly, Anderson (1990) presents the value of SM as a possible moderator of leadership training. As high self-monitors are able to accurately display behaviors that are appropriate to the immediate situation but not necessarily congruent with their private values and attitudes, Anderson (1990) states that high self-monitors should benefit most from first type of leadership training which encourages

[18] Initially, Snyder (1974) sought to assess five hypothetical components of the construct with his Self-Monitoring Scale. However, factor analytic studies did not confirm these five components (e.g. Briggs, Cheek & Buss, 1980; Gabrenya & Arkin, 1980; Wolfe, Lennox & Hudiburg, 1983) and there is still much debate about the reliability and validity of its revison (Miller & Thayer, 1989). With regard to the questionable validity of the self-monitoring Scale, Lennox and Wolfe (1984) provided their own revised test. Their new test obtains only two facets of the construct, namly sensitivity and self-presentation.

leaders to change their behavior according to a given situation (e.g. by skill training, goal setting, role playing). This is also suggested by Haarmann (2006). As low self-monitors are guided mainly by internal attitudes, their role demands must be congruent with the personality and values to enable them to be effective as a leader. In order to produce an effective match between leaders' intrinsic behavioral style and their role demands in leadership, low self-monitors are supposed to benefit most from second type of training that supports leaders in altering organizational structures (e.g. Leader Match). However, in general, organizational structures cannot tolerate imposition of each individual's personal values and need to norm and structure role demands in cooperative working settings. This limits the applicability of the second type of training. In fact, organizations tend to provide the first type of leadership training, which encourages leaders to change their behavior according to a given situation. Hence, the study at hand also focuses on this type of training.

The second study provides some support for the proposed moderating role of SM in the emergence of transformational leadership. Sosik and Dinger (2007) examined the relationship between SM, transformational leadership and vision content within a longitudinal research design. Participants were 183 corporate managers who completed a 14-week leadership development course as part of an executive Master of Business Administration program that focused on enhancing leadership potential with an emphasis on self-awareness, visioning, and transformational as well as contingent reward leadership. Results confirm the moderating effect of SM for the relationship between transformational leadership and inspirational vision themes in a written vision statement. As the transformational leadership training program of the present study is supposed to change leaders' behaviors and not to alter leaders' organizational structures, it is predicted that high self-monitors will benefit more from the leadership training examined in the present study.

Third, Sosik, Potosky and Jung (2002) used Tsui and Ashford's (1994) *Adaptive Self-Regulation Model* to examine how discrepancies from organizational expectations (i.e., superiors' assessment) influence managers' subsequent leadership behavior and performance. In the Adaptive Self-Regulation Model, SM functions as a key variable that facilitates discrepancy reduction. In his review of the self-monitoring literature, Snyder (1987) concluded that the detection of discrepancies in expectations and evaluations provides feedback which addresses the sensitivity of high self-monitors. Furthermore, high self-monitors are capable to alter their behavior with regard to their

skills in self-presentation. Thus, high self-monitors are motivated to pay attention to feedback and are able to make appropriate behavioral adjustments.

According to the adaptive Self-Regulation Process of Tsui and Ashford's (1994) model, managers first detect discrepancies from standards and try to reduce these discrepancies through SM. Secondly, if there are discrepancies leaders are encouraged to display leadership behaviors that are consistent with organizational expectations. Thus, when they try to reduce discrepancies through SM, they reduce passive leadership behavior, which is discouraged by senior management of the cooperation, and increase active leadership behavior, which is encouraged by senior management. Finally, leadership behaviors are associated with subsequent appraisals of managers' performance.

Sosik and colleagues (2002) found evidence that the discrepancy is positively and significantly related to SM of the leaders. Additionally, SM of the leaders is positively associated with the active forms of leadership (management by exception active, contingent reward, transformational leadership). In conclusion, these results support the assumption that SM may help leaders to reduce discrepancy in expectations and evaluations, and promote increases in active leadership behavior encouraged by senior management.

Thus, the aim of the present study is to further the understanding of the self-regulatory processes used by leaders participating in a transformational leadership development program. These are the first two studies that analyse the moderating effects of SM in a training design. With regard to Tsui and Ashford's (1994) model, high self-monitors are expected to increase the display of transformational leadership and to improve their effectiveness as well as performance after the training intervention. Accordingly, low self-monitors are expected not to increase the display of transformational leadership and not to improve their effectiveness or performance after the training intervention. Both facets of SM, sensitivity and self-presentation, will be examined.

H5 a, b, c: Sensitivity *will moderate the relationship between training and effectiveness of training such that leaders will improve in transformational leadership styles (H5a), in performance appraisals by supervisors (H5b) and in positively affecting followers' OCB (H5c) when* sensitivity *is high and leaders will not improve when* sensitivity *is low.*

H5 d, e, f: Self-presentation *will moderate the relationship between training and effectiveness of training such that leaders will improve in transformational leadership styles (H5d), in performance appraisals by supervisors (H5e) and in positively affecting followers' OCB (H5f) when* self-presentation *is high and leaders will not improve when* self-presentation *is low.*

2.3.2. Emotional Intelligence of the Leader

The construct of *emotional intelligence* (EI) is similar to SM and another stable disposition that is associated with transformational leadership. Whereas SM refers to the ability to monitor social cues and adapt the behavior appropriately to the social situation, EI describes the ability to monitor one's own and others' emotions and to regulate one's and others' emotions and thinking accordingly. Transformational leaders are claimed to recognize the affective and emotional needs and responses of followers (Bono & Judge, 2003). Furthermore, transformational leaders are supposed to be gifted in the appraisal, expression, and regulation of emotions in themselves and others (Sosik & Dworakivsky, 1998). In fact, such skills equal the concept of EI. Thus, aspects of EI may help to further understand the influence of leaders' dispositional attributes on transformational leadership (Sosik & Dworakivsky, 1998). However, the construct of EI is still controversial discussed in academic literature.

EI is a product of research in several areas, such as emotions, traits and especially intelligence. Already in the beginnings of research on intelligence, scientists developed the idea that there was more to the concept of intelligence than academic ability (e.g. Gardner, 1983; Sternberg & Smith, 1985; Thorndike, 1920). Scientists such as Thorndike (1920) who introduced the term social intelligence and Gardner (1983) who originated personal intelligence established the notion of interpersonal intelligence. Eventually, Salovey and Mayer (1990) developed the construct of EI and introduced the term in academic literature. In the beginning, EI was defined as the capacity to process emotional information accurately and efficiently, including information relevant to the recognition, construction, and regulation of emotion in oneself and others (Mayer & Salovey, 1995; Salovey & Mayer, 1990). However, this was little noticed in academic and professional literature till the moment when the economical journalist Goleman (1995) published a book that stimulated the break through of the concept EI.

As EI developed in the academic literature, some principal issues were raised to challenge the eligibility of the construct and question the definition as an actual intelligence (e.g. Antonakis, 2003; Schuler, 2002). Mayer, Caruso, and Salovey (1999) attempted to induct EI as an actual intelligence construct using standards generally used to determine types of intelligence. According to some academic critics, they have yet to successfully do so. In 1997, Mayer and Salovey admitted that their earlier model of EI was mixed with traits and other characteristics, and that the definitional structure was

too vague in some areas (Mayer & Salovey, 1997). As a consequence, they restricted the representation of EI to cognitive abilities and filtered out personality traits. In regard to this, Mayer and Salovey (1997) define EI as

> „… the capacity to reason about emotions, and of emotions to enhance thinking. It includes the abilities to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth“ (p. 5).

This so called four-branch-ability model provides the cognitive abilities of a) perceiving emotions accurately; b) facilitating thoughts by emotions, c) understanding emotions and d) regulating emotions (see table 7). Branch one and Branch four remind of the two facets of SM, sensitivity and self-presentation.

Table 7: Mayer and Salovey's 1997 Model of Emotional Intelligence

Branch 1	Branch 2	Branch 3	Branch 4
perception, appraisal, and expression of emotion	emotional facilitation of thinking	understanding and analyzing emotions, employing emotional knowledge	reflective regulation of emotions to promote emotional and intellectual growth

In literature of EI, two fairly distinct groups of EI models are differentiated: ability models, which view EI as a skill, and mixed models, which include mental abilities, dispositions, and traits (Mayer, Salovey & Caruso, 2000). Currently, three competing models of EI are gathering the most attention and research. Two of the three models are mixed (Bar-On, 1997; Goleman, 1995) and one is ability based (Mayer & Salovey, 1997). For the present study, Mayer and Salovey's (1997) construct of EI was chosen as it is the only construct viewing EI as a cognitive ability and as it has received the most rigorous testing and support of the three models.

With regard to transformational leadership, researchers still debate controversially about the usefulness of EI for leadership research. While Prati and colleagues (Prati, Douglas, Ferris, Ammeter & Buckley, 2003a; 2003b) propose EI as vital for leadership, Antonakis (2003) criticizes their claim by demonstrating that evidence supporting their

assumption is nonexistent, contradictory, incomplete, or misrepresented. Actually, many have asserted that there are links between EI and leadership (e.g. Ashkanasy & Tse, 2000; Bennis, 1989; Goleman, 1995) while there still has been relatively little evidence to support this.

However, there is some empirical evidence for the link between leadership and EI. Beside some exploratory studies (Dulewicz & Higgs, 2000; Feyerheim & Rice, 2002; Higgs & Aitken, 2003) with small samples and weak measures that support the relationship between EI and leadership, two studies (see table 8) found a positive relationship between EI and transformational leadership (Barling, Slater & Kelloway, 2000; Palmer, Walls, Burgess & Stough, 2001).

Table 8: Intercorrelations Between Transformational Leadership and Emotional Intelligence

	EI measurement	II	IM	IS	IC
Barling, Slater, & Kelloway, 2000	EQ-i	.12	.56**	.35**	.49**
Palmer, Walls, Burgess, & Stough, 2001	TMMS (emotional monitoring)	.44**	.42**	.27	.55**
	TMMS (emotional management)	.27	.37*	.16	.35*

Note: II (Idealized Influence), IM (Inspirational Motivation), IS (Intellectual Stimulation), IC (Individualized Consideration); EQ-i refers to Bar-On's (1997) Emotional Quotient Inventory, TMMS is the Trait Meta Mood Scale by Salovey, Mayer, Goldman, Turvey, and Palfai (1995). * = $p < .05$; ** = $p < .01$

In the study of Barling, Slater and Kelloway (2000), 49 managers provided self-ratings for EI while their 187 followers assessed their managers' transformational leadership. Findings showed that transformational leadership (Idealized Influence, Inspirational Motivation, Individualized Consideration) is associated with EI. In contrast, management by exception passive, management by exception active, and laissez-faire were not associated with EI. Additionally, Palmer and colleagues (2001) found significant and positive relationships between selected components of transformational leadership and EI in a sample of 43 managers. Specifically, the Inspirational Motivation and Idealized Influence components of transformational leadership were significantly correlated with both the ability to monitor and the ability to manage emotions in oneself and others. Scientists called for research on EI and transformational leadership to identify new sets of emotion-based skills, which could be used in leadership training and development programs to enhance leadership effectiveness (Palmer et al., 2001).

Though these findings must be considered as exploratory, they do suggest that further research is warranted. On the one hand, Barling and his colleagues (2000) acknowledge the possibility that being a transformational leader raises one's EI. On the other hand, they assume that EI may predispose individuals to different leadership behaviors. Thus, being more emotionally intelligent might predispose managers to benefit more from transformational leadership training. There has been little research on EI as a moderating variable (Douglas, Frink & Ferris, 2004). Thus, despite the criticism on the usefulness of the construct, the present study aims to investigate two facets of EI as potential moderators. These facets are *others' emotional appraisal* and *use of emotion* of the Wang and Laws Emotional Intelligence Scale (Wong & Law, 2002) as these are similar to the two self-monitoring facets.

H6 a, b, c: Others' emotional appraisal *will moderate the relationship between training and effectiveness of training such that leaders will improve in transformational leadership styles (H6a), in performance appraisals by supervisors (H6b) and in positively affecting followers' OCB (H6c) when* others' emotional appraisal *is high and leaders will not improve when* others' emotional appraisal *is low.*

H6 d, e, f: Use of emotion *will moderate the relationship between training and effectiveness of training such that leaders will improve in transformational leadership styles (H6d), in performance appraisals by supervisors (H6e) and in positively affecting followers' OCB (H6f) when* use of emotion *is high and leaders will not improve when* use of emotion *is low.*

Figure 5 presents an overview of all hypotheses presented in chapter two. These were tested on the basis of data of two civilian samples in Germany. By doing so, this study is the first piece of research on the systematic development of transformational leadership, which provides the investigation of effects on followers' OCB and on performance appraisals by supervisors. Furthermore, the study at hand is the first piece of research investigating SM and EI as possible moderators of trainings effectiveness.

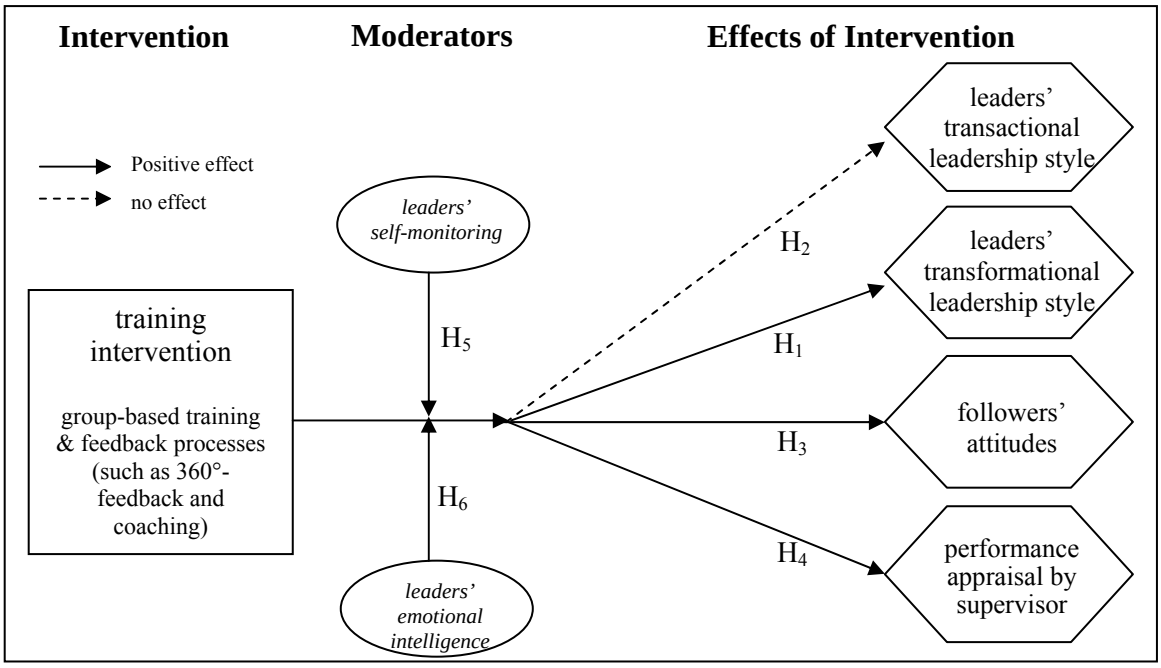


Figure 5: Overview of Hypotheses

3. Method

This chapter presents setting and participants as well as the training intervention and measures for each of the two studies separately. Data of both studies was collected up to the year 2008.

3.1. Study I: International Service Company in Germany

Study I provides an evaluation of a transformational leadership training program designed to teach leaders to improve their transformational leadership style over the duration of twelve months. For the evaluation, the most important method is the assessment of changes in the dependent variables transformational leadership style, followers' OC and OCB, and performance appraisal by supervisor before and after the training interventions in the experimental group. Furthermore, influences of possible moderators SM and EI were examined.

3.1.1. Settting and Participants

The study took place in Germany, where a branch of the international corporation is located. At the German branch, about 200 employees work at a local laboratory service. Headquarters of the international drug development corporation is located in the United States of America. Currently, the local branch in Germany faces challenges such as high workload, growth, and diversity as headquarters are abroad and German employees are exposed to American corporate management. With regard to the small number of headcount, there is no department of HR development at the German branch. Consequently, leaders did receive little opportunities in form of managerial training prior to the present investigation.

The sample consisted of 23 midlevel and nine upper level managers (in all, N = 32). In the intervention group, 25 leaders participated in one of four courses of transformational leadership training program[19] conducted by the author and a co-trainer. Nine upper level managers functioned as a control group filling in questionnaires at the same time that participants of the intervention group received leadership training and again three months later. Not until after the second point of data collection, these

[19] The typical group size for trainings in Germany is usually between eight and 16. In the actual study group size ranged from four to nine participants.

leaders received results of the survey in form of a 360-degree-feedback report. All were informed that they would be offered to participate in the leadership development program at a later time. Whereas five managers dropped out due to schedule difficulties, four of these upper level managers started with the training program six months after the first three intervention groups. Only two of them chose to participate in the study and provided completed questionnairs for points-in-time T1 and T2 as a waiting control group.

The intervention group consisted of nine male and 16 female leaders; the control group consisted of four male and five female managers. Thus, this study is the first piece of research on transformational leadership development with a sample predominated by female leaders. All of the participants were native Germans with an academic background, mostly in the pharmacological area and were full-time corporate employees. Data of age and job tenure could not be obtained.

All participants were informed that the training was evaluated. Whereas participants of the intervention group included all middle level managers of the German branch, participants of the control group included the total of the upper management. These decisions were made by organizational management.

Table 9: Sample Sizes of Study I at various Points-in-Time

	T0	*T1*	*T2*	*T3*	*T4*	*T5*
Intervention group		23	23	19	19	15
Waiting Control group	2	2	2	2		
Control group	7	7				

Participants of the training group took part in the training in order to get support for their work as a leader. The first two measurements and the starting workshop were obligatory whereas the last three measurements and trainings were voluntarily. This fact among others resulted in several dropouts (see table 9): one participant decided not to continue with the program, two dropped out because of personal reasons (pregnancy) and four because of schedule difficulties. Furthermore, one manager dropped out because of position changes. Technical problems with the online MLQ for one training group led to the small data set regarding MLQ-data at point-in-time three (T3).

3.1.2. Training Interventions

With regard to Bass' (1990b) differentiation for interventions to improve transformational leadership (see section 2.2.), there are two different aspects involved in the training program. According to Bass' (1990b) recommendation of group-based training, the leadership development program included group-based training aspects such as lecture, role-play and discussion. In order to meet Bass' second suggestion to make use of feedback processes, two methods of feedback processes were integrated in the program as well. Firstly, 360-degree feedback reports were provided for the leaders of the experimental group at all five times of the training program. Secondly, peer-based team coaching was conducted at all five times of the training program.

The program started with a two-day group-based *Transformational Leadership Workshop* for all leaders in the experimental group. This workshop was followed by four two-day *follow-up* sessions at intervals of three months. Thus, after twelve months, a participant had passed through all five trainings interventions. Each of the four follow-up sessions focused on one of the four transformational leadership styles.

Transformational Leadership Workshop

The Transformational Leadership Workshop was designed to familiarize leaders with the concept of Full Range of Leadership, respectively transformational leadership behavior, and to reflect and plan the implementation of transformational leadership in the leaders' work situations (Bass & Avolio, 2005b).

Referring to the *Training Full Range Leadership* (Bass & Avolio, 1999), participants were asked to sequentially identify the characteristic behaviors of the best and worst leaders they had ever encountered. The characteristics identified were then associated with the leadership behaviors of the Full Range of Leadership Theory by the workshop facilitator and discussed within the group of participants. After this practical approach to the emergence of transformational leadership, participants were introduced to the Full Range of Leadership Theory in a theoretical lecture. Thereafter, participants received their individual 360-degree feedback report and were offered individual feedback by the facilitator. The 360-degree feedback reports consisted of about 50 pages with leadership style analyses put into graphs (Bass & Avolio, 2005a). Being adverted to these feedback reports, participants were instructed to create a first draft of action plan via goal setting for the implementation of transformational leadership

behavior at their specific workplace. In order to enhance the commitment to the goal, trainees were free to select which transformational leadership style they planned to work on to make improvements.

At the second day of training, participants were arranged in groups of four to five leaders. Guided by the facilitator or the co-trainer, participants sequentially provided individual peer-based feedback to each participant's plan and his or her individual leadership situation in peer-based team coachings (see below). With regard to this feedback and to the action plan, leaders practiced implementations of selected transformational leadership behaviors through role-play. Finally, the participants were asked to prepare an improved version of their action plan.

Follow-up Sessions

The purpose of the four two-day follow-up sessions was to deepen the knowledge about the four transformational leadership styles (see table 10). For this purpose, contents maintaining and supporting transformational leadership behaviors were presented and discussed. In addition, some supporting skills were trained and exercised via role-plays and practiced in small groups.

Table 10: Content of the Four Follow-up Sessions

session	follow-up „Individualized Consideration„	follow-up „Inspirational Motivation„	follow-up „Intellectual Stimulation„	follow-up „Idealized Influence„
presented content	recognizing followers' requirements, developing followers with regard to their requirements	need for a Vision, motivation through Leading by Pygmalion (optimism), motivation through teamwork	need for creativity, using conflicts at the workplace to find better solutions, utility of different perspectives	values in organisations, utility of values, reflecting ones' own values compared to values of the organization
trained skills	conversational skills such as asking the right questions to detect followers' requirements	team building by group-building via peer-based team coaching	creativity techniques, conversational skills regarding conflicts	rhethorical skills such as using methaphors, body language
literature	e.g. Fisher & Shapiro, (2005); Dehner & Dehner, (2007)	e.g. Lundin, Paul, & Christensen (2003)	e.g. Dehner & Dehner (2007); Benien, (2007)	e.g. Braun (2007)

The follow-up sessions always started with lectures, discussions and exercises referring to one of the transformational leadership styles (see 'presented content' in table 10). The afternoon of the first day and the morning of the second day focused on peer-based team coachings. It was the aim to help leaders to transfer the new-learned

behaviors to their individual work settings by peer-based team coaching over time. During peer-based team coachings, participants present their individual work situation and receive recommendations from their colleagues how to adjust the new-learned behavior to this work settings. The second day ended with role-plays or exercises of the learned skills (see 'trained skills' in table 10) and with the preparation of a renewed action plan. With regard to these action plans, trainees were asked to plan actions to enhance transformational leadership behavior, which was focused on in the actual follow-up session.

Peer-based Team Coaching

Gerd Rowold developed *peer-based team coaching* (PTC) in the early 1990ties when a Swiss corporation assigned freelance consultant Rowold to support and renew the corporate leadership practice (Rowold, 2006). Later on, Rowold and his colleague Schley applied the method in several contexts (Rowold & Schley, 1998). In the last 15 years, several organizational coaches instructed and implemented PTC to various target audiences such as organizational managers, priests, teachers, musicians or students.

PTC has been chosen as a method for the present leadership development program as it perfectly reflects transformational leadership behavior in its methodology and in its philosophy. First, the method of PTC makes use of the different perspectives of participants and supports creative thinking. This is evocative of Intellectual Stimulation as transformational leaders view problems from different perspectives and stimulate the creativity of followers. Second, the philosophy of PTC emphasizes a future orientation, which is very optimistic and encouraging. This facet reminds of leadership styles Inspirational Motivation and Idealized Influence as both place much emphasis on optimistic visions of the future. Finally, PTC starts an open process of personal development by focussing on continual learning to bring out the best of the participant. This commemorates Individualized Consideration and its' focus on development of followers.

All these aspects regarding transformational leadership styles are restored in the process of PTC. However, before the process can be introduced, several roles of participants must be explained. Each participant is given the opportunity to serve as *protagonist* receiving the coaching once a session whereas the other participants serve as *counselors*. Rotational, the counselors take the additional role of the *moderator*, the

writer or the *observer*. Taking their role, the participants pass through the different phases of the coaching process (see table 11).

First, the process starts with the protagonist presenting his/her leadership situation. Sometimes, a picture is painted to help and to underline the presentation. The counselors are allowed to ask questions to further understand the situation of the protagonist.

After 20 minutes, the moderator leads over to the second phase, the conference of counselors. From now on, the protagonists may not speak or intervene. However, the protagonist is still present and hears everything to be said when the counselors collect their impressions, thoughts and emotions regarding the protagonist's presentation. The writer now starts to record all insights on flip chart. The aim of this phase is to collect the impressions from all perspectives without discussing them. Furthermore, the prohibition to intervene helps the protagonist to consider and accept different viewpoints.

This phase discharges into the search of the *key theme*. In this phase the counselors strive to find the key theme, which will help the protagonist to face actual challenges and to further develop. Within ten minutes, counselors consider all points having been collected before and discuss them until they sum up the main action, which will help the protagonist to performe better with his/her situation. The result is a short sentence. This sentence has to be formulated in future or present tense to encourage the protagonist to become active. In regard to this, negations are not allowed in the sentence. In some cases, metaphorical language proves to be most effective. An example key theme is „I become a stirring river". In this case, the participant was encouraged to drag followers along by powerful enthusiasm. Another example is „I use chaos as a chance and find new ways". In that case, the leader is encouraged to perceive a chaotic work environment as a chance to find new approaches, which are intellectual stimulating for himself/herself and followers.

Table 11: Curriculum of Peer-based Team Coaching

	Phase	*Duration*
1.	Protagonist presents leadership situation	20 minuntes
2.	Conference of Counselors	20 minuntes
3.	Search of Key Theme	10 minuntes
4.	Collecting Ideas for implementation of Key Theme	10 minuntes
5.	Activation through role-play *(optional)*	20 minuntes
6.	Reflection of PTC-Process	10 minuntes

After the counselors have found the more abstract key theme, they collect more practical and creative advices and ideas, how the protagonist can implement the key theme at the work place. In these ten minutes, the multiple perspectives of the counselors produce a variety of intellectually stimulating ideas. Optionally, one of the ideas is tried out right away in a role-play by the protagonist. Otherwise, the last phase follows right away after the collection of ideas.

In the last phase, the observer comes into play. He or she provides feedback to all role keepers and to the group. Furthermore, the observer gives advice how the group can become more effective in the next PTC. Afterwards, the protagonist is allowed to speak again. He or she may reflect how he or she experienced the process. Often participants report that it was difficult but important to remain silent as they actually learned how to listen more carefully and to accept different viewpoints. Generally, protagonists evaluate the 60 to 90 minutes as very supportive and enigmatic as managers nowadays rarely experience such a long period of time of undivided attention of colleagues towards their problems and challenges. Last but not least, the writer accomplishes the last ritual when he/she convolves the sheets of flip charts and hands them over to the protagonist with the words „make something out of it!“

3.1.3. Measures and Procedure

Data referring to the leadership style of the participant was collected through an Internet-based survey (Bass & Avolio, 2000; Rowold, 2004), which was completed online outside the training and submitted to the author two weeks before the training program started, respectively two weeks prior to the follow-up sessions. Participants were asked to administer the 360-degree feedback assessment by completing the online survey within two weeks and by inviting and instructing at least five subordinates, the supervisor and at least three colleagues to the 360-degree feedback assessment.

Data referring to potential moderators, followers' attitudes and the performance appraisal was administered by paper-pencil-questionnaires. All questionnaires were sent to the participants in order to complete the surveys themselves (self-monitoring scales, emotional intelligence sacales) or to hand them to their followers (followers' OCB and OC) or supervisors (performance appraisal). Completed questionnaires were collected in sealed envelopes and returned to the author. In the following the various questionnaires are presented in detail.

Ratings of leadership: Leadership ratings were obtained from participants, followers, peers and supervisors using aggregated sub-scales and items from Multifactor Leadership Questionnaire (MLQ-Form 5X; Bass & Avolio, 2000) translated by Rowold (2004). Research has shown the MLQ-5X to be a psychometrically sound instrument in terms of measuring the construct of transformational leadership, and what Bass and Avolio refer to as Full Range of Leadership Styles (Antonakis et al., 2003; Avolio, Bass & Jung, 1999; Rowold, 2005).

In the present study, the MLQ sub-scales measured as components of transformational leadership were aggregated to one transformational score (20 items, α = .93). Furthermore, MLQ subscales measuring components of transactional leadership were aggregated to one transactional score (12 items, α = .42) and finally the MLQ subscale Laissez-faire was measured by four items (α = .78). Item examples can be obtained by PD Dr. Jens Rowold (rowold@psy.uni-muenster.de) or by Mind Garden (www.mindgarden.com). Raters rated each item on a 5-point rating scale declaring the frequency with which a certain leadership behavior is perceived ranging from 1 (not at all) to 5 (frequently, if not always). The Cronbach's Alphas for transformational subscale and laissez-faire subscale provide an acceptable internal consistency. When Cronbach's Alpha is exceeding the conventional level for acceptance α = 0.70, the scale is accepted as internally consistent (Nunally, 1978). The subscale transactional leadership does not meet this criterion. It was decided to provide results of transactional leadership scales nonetheless as they were necessary for the non-equivalent variable design. However, results referring to the transactional leadership scale should be considered with caution.

The leadership behaviors of managers reflect broad patterns of behavior. Therefore, scores for the subordinates and colleagues reporting to each manager were averaged into one rating for each manager. Also, the followers' ratings of attitudes were aggregated. Following the recommendation made by McGraw and Wong (1996) within-group agreement indices (r_{wg}) were calculated (James, Demaree & Wolf, 1984). Table 12 indicates that three raters highly agreed on the leadership scales and attitudes (r_{wg} < .83). On the basis of the r_{wg} scores, it was concluded that aggregation was appropriate.

Table 12: Coefficients of Interrater Reliability (Study I)

	r_{wg}
TFL perceived by all perspectives	.49
TAL perceived by all perspectives	.17
LF perceived by all perspectives	.60
TFL perceived by subordinates	.54
TAL perceived by subordinates	.25
LF perceived by subordinates	.70
OCB	.45
OCa	.37
OCn	.39
OCc	.39

Note: TFL (transformational leadership), TAL (transactional leadership), LF (laissez-faire leadership), OCB (organizational citizenship behaviour), OCa (affective organizational commitment), OCn (normative organizational commitment), OCc (continuance organizational commitment).

Typically for longitudinal studies conducted in civilian contexts, the rate of return regarding questionnaires reduced over time due to drop-outs and reduced motivation of raters despite the efforts made (see table 13). Notwithstanding methodological limitations, it was decided to integrate all data, which was gathered to increase the power of the analyses.

Table 13: Number of Intervention Group Data Sets Available for each Point-in-Time (Study I)

Time	**T1**	**T2**	**T3**	**T4**	**T5**
Intervention	***WS***	***IC***	***IM***	***IS***	***II***
MLQ (all)	87	72	52	40	31
MLQ (follower) *aggregated*	21	19	13	11	9
MLQ (supervisor)	20	13	8	8	8
OC	22	19	14		
OCB	22	19	14		
Appraisal	14	21			
SM	22				
EI	22				

Note: WS (Workshop Transformational Leadership), IC (Follow-up session Individualized Consideration), IM (Follow-up session Inspirational Motivation), IS (Follow-up session Intellectual Stimulation), II (Follow-up session Idealized Influence).

To detect the effectiveness of the training intervention, the present study measured the self-reported attitudes OCB and OC of the followers and a performance appraisal completed by the supervisor.

Organizational citizenship behavior was measured using ten items of a self-report measure by Six, Felfe, Schmook and Knorz (2001) with regard to Podsakoff, Ahearne and MacKenzie (1997). A sample item reads „Even in my free time, I am engaged with topics from work“. Followers rated each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Reliability estimate (coefficient alpha) was α = .77.

Organizational commitment was measured using 13 items of a self-report measure by Felfe, Six and Schmook (2002), which measures OCa (five items), OCn (four items) and OCc (four items) regarding to Allen and Meyer (1990). A sample item reads „I am proud to belong to this organization.“ Followers rated each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Reliability estimate was α = .65 for OCa, α = .69 for OCn and α = .82 for OCc. With regard to Cortina (1993), reliability of scales with few items is acceptable even when below .70.

Leadership performance appraisal was measured using Rowold's unpublished 37-item instrument. The four subscales reflect four performance categories, which Conway (1999) identified as relevant task performances and context performances (extra-role performance) for managerial jobs. *Job dedication* (seven items, α = .79) and *interpersonal facilities* (five items, α = .92) are among the context performances. A sample item for job dedication is „Leader is motivated even in difficult situations“ and for interpersonal facilities „Leader is sensitive with regard to others“. *Technical-administrative task performance* (15 items, α = .94) and *leadership task performance* (ten items, α = .96) are counted among task performances of managers. A sample item for technical-administrative task performance reads „Leader is a good planer“, and for leadership task performance „Leader motivates followers“. Supervisors rated each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The present study has measured two self-reported personal attributes of the leaders.

Self-monitoring was measured using a two-scale instrument developed by Lennox and Wolfe (1984) and translated by Schyns and Paul (2002). Items were rated on a 6-point scale ranging from 1 (always right) to 6 (always wrong). The first subscale (sensitivity) consists of six items (α = .76). A sample item of this subscale is: „I'm often

able to read people's true emotions through their eyes". The second subscale self-presentation consists of seven items (α = .69). A sample item of this subscale is „When I feel that the image I am portraying isn't working, I can readily change it to something that does". The measure demonstrated acceptable psychometric properties in prior leadership research (e.g. Schyns, 2001).

Emotional intelligence was measured by using two subscales of the Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002). The 20-item self-report measure provides four subscales which base on Mayer and Saloveys ability model of EI (Mayer & Salovey, 1997). The present study only used the two scales, which are similar to the two subscales of self-monitoring. *Others' emotional appraisal* is comparable to sensitivity. A sample item reads „I am sensitive to feelings and emotions of others." The second subscale *use of emotion* is comparable with self-presentation. A sample item reads „I would always encourage myself to try my best". Leaders rated each item on a 7-point scale ranging from 1 (strongly agree) to 7 (strongly disagree). Wong and Law (2002) report acceptable reliability estimates (Cronbach's alphas) for the two dimensions of this practically short EI measure (.88 and .85). German translation was provided by the author. Reliability estimates (coefficient alphas) for the two dimensions of others' emotional appraisal (five items) and use of emotion (six items) were .87 and .85.

The questionnaires can be found in Appendix A to F.

3.2. Study II: German Service Company

Study II was done for three reasons: The first aim was to replicate the findings of Study I within another civilian context. The second aim was to get information about the generalizability of the findings in Study I in order to further broaden external validity. Finally, the third aim was to perform a more sophisticated design with a real control group over three points-in-time.

Accordingly, Study II provides a second evaluation of the transformational leadership training program used in Study I. Whereas Study I evaluates the Transformational Leadership Workshop plus three of the four follow up moduls, Study II evaluates the Transformational Leadership Workshop plus only two of the four follow up sessions over the period of nine months.

3.2.1. Setting and Participants

Study II took place in three branches in Lower Saxony, Northrhine Westfalia, and Saxony-Anhalt of a German corporation of the customer care industry. The Customer Care Service Provider employs about 3,200 employees at four branches in Germany. The company started as a classical call centre. Today, the owner-run corporation is a service company offering customer care solutions. Currently, the corporation faces challenges such as negative image of the industry in Germany and high workload. Leaders of this corporation receive a lot of support in form of managerial training. Due to the feedback culture of the organization, leaders are used to receive continuous feedback on their performance by supervisors.

The sample of Study II consisted of 32 midlevel and nine upper level managers (in all, N = 41). Similar to Study I, twenty-one leaders of the intervention group participated in five separate management training groups of transformational leadership training program[20] given by the author and sometimes by an additional co-trainer. In the intervention group, 16 midlevel managers and five upper level managers participated. The control group consisted of 16 midlevel managers and four upper level managers. The training group had 15 male and six female leaders; the control group had eight male and twelve female managers. All of the participants were native Germans with an

[20] In study II group size ranged from four to six participants.

academic background and were full-time corporate employees. Data of age and job tenure could not be obtained.

Table 14: Sample Sizes of Study II at Various Points-in-Time

	T1	*T2*	*T3*	*T4*
Training group	21	21	21	13
Control group	20	18	5	

All participants were informed that the training was evaluated. Organizational management selected participants of the training group and of the control group. Training intervention for the intervention group and 360-degree assessment for control group were both successfully promoted as an investment in the development of promising employees. Participation on the training intervention (T1 to T3) as well as on the feedback process of the control group (T1 and T2) was obligatory whereas the last measurements (T4, respectively T3) were voluntarily. This fact among others resulted in several dropouts (see table 14): several participants decided not to provide data when it was voluntarily, one dropped out because of personal reasons (pregnancy) and two left the company. Contrary to Study I, participants of the control group received their 360-degree feedback report when participants of the intervention group received a training intervention. This was done due to the wishes of the company.

3.2.2. Training Interventions

The same training procedure was used as in Study I. The only exception was that, serving the wishes of the participating company, only two instead of all four follow-up sessions were conducted. As in Study I, the first follow-up sessions had a focus on Individualized Consideration whereas the second follow-up placed emphasis on Inspirational Motivation. For more detailed descriptions of the interventions please see section 3.1.2.

3.2.3. Measures and Procedure

Primarily the same measures and the same procedure were used as in Study I, except that, with regard to wishes of the cooperating company, followers' OCB was not measured. Furthermore, with regard to the promising outcomes of Study I, performance

appraisals by supervisors were collected at three times of the training program to detect the longevity of effects.

Cronbach's Alphas for this sample are presented in table 15. As in Study I the Cronbach's Alphas of the scales TAL, OCa and self-presentation are not satisfying. Further inspection of analysis regarding Cronbach's Alphas showed that even the removal of single items did not improve the coefficients. Table 15 also provides data of the r_{wg} when data was aggregated.

Table 15: Coefficients of Cronbach's Alpha and Interrater Reliability (Study II)

	Cronbach's α	r_{wg}
TFL perceived by all perspectives	.90	.69
TAL perceived by all perspectives	.62*	.19
LF perceived by all perspectives	.67	.67
TFL perceived by subordinates	--	.67
TAL perceived by subordinates	--	.25
LF perceived by subordinates	--	.69
OCa	.45*	.28
OCn	.78	.41
OCc	.72	.33
Performance 1	.86	--
Performance 2	.88	--
Performance 3	.94	--
Performance 4	.90	--
SM (Sensitivity)	.62	--
SM (Self-Presentation)	.40*	--
EI (OEA)	.90	--
EI (UOE)	.70	--

Note: TFL (transformational leadership), TAL (transactional leadership), LF (laissez-faire leadership), OCB (organizational citizenship behaviour), OCa (affective organizational commitment), OCn (normative organizational commitment), OCc (continuance organizational commitment); * further inspection of analysis regarding Cronbach's Alphas showed that even the removal of single items did not improve the coefficients.

Again, the rate of return regarding questionnaires reduced over time due to drop-outs (see table 16). To increase the power of the analysis, it was decided to integrate all data having been gathered.

Table 16: Number of Intervention Group Data Sets Available for each Point-in-Time (Study II)

Time	**T1**	**T2**	**T3**	**T4**
Intervention		***WS***	***IC***	***IM***
MLQ (all)	81	85	78	45
MLQ (follower) *aggregated*	20	23	20	13
MLQ (supervisor)	20	20	19	8
OC	18	10	10	--
Appraisal	15	17	14	--
SM	15	--	--	--
EI	15	--	--	--

Note: WS (Workshop Transformational Leadership), IC (follow-up session Individualized Consideration), IM (follow-up session Inspirational Motivation).

4. Results

In line with the literature on training (Hochholdinger et al., 2008a), effect sizes were interpreted (Cohen's d, cf. Arvey, Cole, Hazucha & Hartanto, 1985; Yang, Sackett & Arvey, 1996). In general, results of summative training evaluations should be compared to other results of training evaluations. For this comparison, effect sizes are the common metric (Hochholdinger, Rowold & Schaper, 2008b). Therefore, main focus will be set on the interpretation of effect sizes. Generally, an effect size of d =.20 is referred to as a small effect, whereas an effect sizes of d = .50 is referred to as medium (Cohen, 1988; 1992). A large effect size is d < .80 (Cohen, 1988; 1992). Effect size estimates were obtained by comparing pre- and post-intervention means (with respective pre- and postintervention standard deviations) for the various measures of dependent variables for each group separately. Cohen's d was calculated using gain scores and pooled standard deviations (Cohen, Cohen, West & Aiken, 2002), using the standard formula for dependent samples:

$$d = \frac{M_{post} - M_{pre}}{\sigma_{pooled} \times \sqrt{(1-r)}} \qquad (1.1)$$

with $\sigma_{pooled} = \sqrt{((\sigma_{pre}^2 + \sigma_{post}^2)/2)}$ and r as the correlation between pre and post measures (Bortz, 1999; Cohen, 1988). Only when data did not allow for this calculation of the corrected effect sizes (e.g. when r = 1), the more simple formula for independent samples (Bortz, 1999; Cohen, 1988) was used:

$$d = \frac{M_{post} - M_{pre}}{\sigma_{pooled}} \qquad (1.2)$$

The effect size is a standardized, sample independent metric for training effectiveness (Holling, 1998; Holling & Schulze, 2004). Therefore, Holling (1998) suggests that effect sizes should be used and interpreted when sample sizes are available. With regard to Holling's claim and with regard to the low power typical for evaluations of leadership trainings, a hypothesis will be accepted when effect sizes suggest changes in the expected direction even when analyses of variance do not obtain significant effects.

The effects of training on the dependent variables are presented separatley for both studies in sections 4.1 and 4.2 as the development after training interventions appeared to be different for both samples at some points-in-time. Firstly, repeated measurement analyses of variance (RM-ANOVA) with the inner subject factor ‘Time’ (repeated measures) and between subject factor ‘Group’ (intervention group vs. control group) were used to test whether participants improved after training in the dependent variables compared to participants of the control group. The most important effect for the actual evaluation is the interaction effect (Time x Group), as it shows whether participants of the intervention group improve over time compared to the control group. Therefore, only F-statistics of the interaction effects are reported in the following. Due to small sample sizes in both the experimental and control group, the level of significance was set to $p = .10$. In cases when there was no data of the control group available, RM-ANOVA with inner subject factor ‘Time’ was used on data of the intervention group in order to detect changes in the intervention group over time. Accordingly, effects of ‘Time’ are reported in F-statistics. This is followed by reporting effect sizes.

The sections of training effects are followed by a section (4.3), which deals with the results examining the moderator effects of self-monitoring and emotional intelligence. The forth section (4.4) provides results of utility analyses to calculate the return on investment of the training intervention.

4.1. Effects of Intervention (Results of Study I)

In regard to Study I, descriptive statistics for all variables at pretest and posttest are presented in table 17. Intercorrelations for all variables can be found in table 18.

Table 17: Descriptive Statistics of Study I

		Intervention group									
		Pretest		Posttest (T2)		Posttest (T3)		Posttest (T4)		Posttest (T5)	
	Variable	M	*SD*	M	*SD*	M	*SD*	M	*SD*	M	*SD*
1.	TFL	3.57	*0.54*	3.60	*0.63*	3.75	0.42	3.73	0.42	3.79	0.44
2.	TAL	3.10	*0.32*	3.07	*0.32*	3.11	0.19	3.10	0.32	3.18	0.40
3.	LF	1.85	*0.63*	1.78	*0.52*	1.67	0.57	1.98	0.63	1.77	0.58
4.	OCB	3.47	*0.27*	3.52	*0.21*	3.57	0.39	----------			
5.	OCa	3.35	*0.57*	3.35	*0.31*	3.50	0.59	----------			
6.	OCn	2.45	*0.63*	2.43	*0.39*	2.49	0.75	----------			
7.	OCc	2.95	*0.54*	2.91	*0.63*	2.85	0.68	----------			
8.	Perf. 1	3.95	*0.63*	4.52	*0.54*	----------					
9.	Perf. 2	3.83	*0.78*	4.22	*0.90*	----------					
10.	Perf. 3	3.76	*0.86*	4.36	*0.62*	----------					
11.	Perf. 4	3.39	*1.08*	4.27	*0.83*	----------					

		Control group			
		Pretest		Posttest (T2)	
	Variable	M	*SD*	M	SD
1.	TFL	3.83	*0.49*	3.74	0.45
2.	TAL	3.20	*0.29*	3.09	0.30
3.	LF	1.80	*0.56*	1.92	0.43
4.	Perf. 1	4.67	*0.30*	4.24	0.38
5.	Perf. 2	4.53	*0.81*	3.93	0.48
6.	Perf. 3	4.82	*0.25*	4.12	0.61
7.	Perf. 4	4.60	*0.61*	3.97	0.40

Note: The means of TFL (transformational leadership), TAL (transactional leadership) and LF (laissez-faire leadership) are the means of all raters (self, supervisor, subordinates and peers). OCB (organizational citizenship behavior), OCa (organizational commitment affective), OCn (organizational commitment normative), OCc (organizational commitment calculative) were rated by subordinates and not available in control group. The four variables Perf. 1 to 4 refer to the four scales of supervisors performance appraisal (Perf. 1 = job dedication, Perf. 2 = interpersonal facilities, Perf. 3 = technical-administrative task performance and Perf. 4 = leadership task performance).

With regard to the means of transformational leadership of the intervention group there is a slight improvement over time, whereas there are almost no changes of the transactional leadership styles' means. However, there is almost no change in transformational leadership at the first posttest (T2). Means of the control group decrease in most of the variables.

Table 18: Intercorrelations of Dependent Variables within the Intervention Group of Study I.

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Leadership style												
1.	TFL [b)]	1	.50***	-.55***	.25	.27	.31	.24	-.05	-.08	-.04	.09
2.	TAL [b)]	.32***	1	-.14	-.03	-.04	-.11	-.23	.19	.10	-.11	.08
3.	LF [b)]	-.60***	-.31***	1	-.32	-.10	-.40	-.37	-.13	-.07	.02	.03
Followers' attitudes												
4.	OCB [b)]	-.13	-.04	.09	1	.42	.87***	.89***	.24	-.06	.04	.06
5.	OCa [b)]	.20	.05	-.11	.23	1	.58**	.49*	.37	-.01	.20	.05
6.	OCn [b)]	.04	-.40	-.08	.14	.59***	1	.76***	.23	-.19	.00	-.01
7.	OCc [b)]	-.23	-.25	.19	.29	.29	.70***	1	.31	.13	.19	.23
Performance appraisal by supervisor												
8.	Perf. 1 [a)]	.59**	-.22	-.00	.01	-.71*	-.57	.06	1	.87***	.86***	.86***
9.	Perf. 2 [a)]	.40	-.26	.06	.21	-.64	-.71*	.22	.75***	1	.81***	.90***
10.	Perf. 3 [a)]	.49	-.16	.13	.11	-.43	-.17	.34	.83***	.59**	1	.90***
11.	Perf. 4 [a)]	.44	-.10	.17	.17	-.67*	-.49	.02	.73***	.60**	.94***	1

Note: Under diagonal are correlations before intervention, above diagonal are correlations with performance appraisal a) three months after the training intervention and with leadership style and subordinates attitudes b) six months after the training intervention. TFL (transformational leadership), TAL (transactional leadership), LF (laissez-faire), OCB (organizational citizenship behavior), OC (organizational commitment, affectiv, normative, calculative), Perf. 1 (job dedication), Perf. 2 (interpersonal facilities), Perf. 3 (technical-administrative task performance), Perf. 4 (leadership tasks performance). * $p < .10$, ** $p < .05$, *** $p < .01$.

A normal distribution was found for both groups at all points-in-time in the dependent variables transformational leadership, transactional leadership, OCB, OC and all four scales of performance appraisals. Thus, the premises for analyses of variance were given. Analyses of variance suggest that groups did not differ significantly in any of the variables at pretest (T1).

4.1.1. Effects on Perception of Transformational Leadership

Firstly, improvements of the experimental group compared to the control group were tested by using RM-ANOVA. No effect (Time x Group) was obtained between pretest and posttest (T2) for the perception of transformational leadership measured by all perspectives (self, supervisor, peers, subordinates), F (1,98) = 2.41, p = .63, η^2 = 0.00[21]. This is not surprising with regard to the means of both points-in-time. Main changes seemed to appear at T3.

Secondly, improvements over time (T1 to T5) of the intervention group in transformational leadership were tested by using RM-ANOVA with only 'Time' as inner subject factor. No effects (Time) were found from all perspectives, F (4, 22) = 1.97, p = .13, η^2 = .26. As this might be due to the low power (N = 26), RM-ANOVA was calculated for the first three points-in-time with N = 48. Significant effects (Time) were found for perception of leadership style of all perspectives, F (2,46) = 3.66, p < .05, η^2 = .14 as well as for the subordinate's perspective only, F (2,11) = 6.55, p < .05, η^2 = 0.54. No effect could be obtained for supervisors' perspective F (2,5) = 0.29, p = .76, η^2 = 0.10. Post hoc analyses (Bonferroni) revealed that in pairwise comparisons there were significant differences between T1 and T3 (p < .10) as well as between T2 and T3 (p < .10) when measured for all perspectives. However, groups did not differ significantly at any point-in-time.

Finally, effect sizes were calculated to detect changes over time in the trained behavior of transformational leadership. Table 19 shows the effect sizes for transformational leadership styles. With regard to the effect sizes, participants of the training did not change in their transformational leadership style after the first training intervention (at T2) whereas participants of the control group decrease their transformational leadership behavior marginally. From T3 on, medium to large effect

[21] Effects on perception of transformational leadership by subordinates, F (1,26) = 0.00, p = .95, η^2 = 0.00 and by supervisors, F (1,19) = 0.33, p = .57, η^2 = 0.02

sizes are obtained from the perspectives of subordinates and from all perspectives in the perception of transformational leadership of the intervention group. Complementary to the results of the RM-ANOVA from T1 to T3, no effects were found for the perspective of the supervisors except for point in time five.

Table 19: Effect Sizes for Transformational Leadership of Study I

	Intervention group			
	T1 to T2	T1 to T3	T1 to T4	T1 to T5
TFL (all perspectives)	0.06	0.54	0.37	0.62
TFL (subordinates)	0.08	1.28	0.91	0.97
TFL (supervisors)	-0.17	0.02	-0.29	0.82
	Control group			
	T1 to T2			
TFL (all perspectives)	-0.32			
TFL (subordinates)	-0.31			
TFL (supervisors)	-0.81			

Note: TFL = Transformational leadership style

Thus, hypothesis H1 can be partially accepted. The training intervention improved transformational leadership behavior six months after the training. Subordinates' ratings of transformational leadership (H1a) and ratings from all perspectives (H1c) increased significantly after leaders had participated in the training intervention. Hypothesis H1b can only be partially accepted, as supervisors did not perceive improvements of their leaders' transformational leadership after three months and after six months. However, supervisors did perceive improvements after nine months (d = .82).

4.1.2. Effects on Perception of Transactional Leadership

No changes of transactional leadership were expected. As expected, the RM-ANOVAs for the untrained variables (transactional leadership style) did not detect significant differences for the subject factors 'Time' and 'Group' before and after the workshop, F (1,98) = 1.59, p = .22, η^2 = 0.02[22] nor for the RM-ANOVA with inner subject factor 'Time' after twelve months, F (4,22) = 0.09, p = .98, η^2 = 0.02 nor for the RM-ANOVA with inner subject factor 'Time' after six months, F (2,46) = 0.02, p = .97, η^2 = 0.00. Furthermore, no changes were apparent in transactional leadership behavior

[22] No significant effects were found for subordinate ratings of transactional leadership between T1 and T2, F (1,26) = 0.63, p = .44, η^2 = .02 and no effects could be obtained for supervisors' ratings between T1 and T2, F (1,19) = 0.02, p = .90, η^2 = .00

perceived by supervisors, F (2,5) = 2.34, p = .19, η^2 = 0.48[23]. However, leaders improved their transactional leadership behavior significantly after six months when perceived by subordinates, F (2,11) = 4.53, $p < .05$, η^2 = 0.45. Calculations of Cohen's d showed, as expected, no improvement in the transactional styles of the participants of the training up to T4 when measured by all perspectives (Table 20). Only subordinates' ratings revealed a large positive effect size after six months (d = .99).

Table 20: Effect Sizes for Transactional Leadership of Study I

	Intervention group			
	T1 to T2	T1 to T3	T1 to T4	T1 to T5
TAL (all perspectives)	- 0.11	0.04	0.02	0.27
TAL (subordinates)	- 0.23	0.99	- 0.07	0.52
TAL (supervisors)	- 0.62	- 1.09	- 0.63	- 0.07
	Control group			
	T1 to T2			
TAL (all perspectives)	-0.58			
TAL (subordinates)	- 0.75			
TAL (supervisors)	- 1.75			

Note: TAL = transactional leadership style

Thus, data suggests that hypothesis H2 can be partially accepted. Generally, the training intervention had no positive influence on the transactional leadership behavior of the participants when leadership behavior was perceived by all raters (H2c) or by supervisors (H2b). Whereas participants of the training group showed an increase in the trained behavior (transformational leadership) after six months, they showed no improvement in the untrained behavior (transactional leadership) when perceived by supervisors or by all perspectives.

4.1.3. Effects on Subordinates' Attitudes

It was expected that subordinates improved their attitudes over time when their leaders had participated in the training intervention. No data of the control group was available. With regard to OCB, RM-ANOVA showed no significant effects (Time) after three months, F (1,17) = .01, p = .91, η^2 = 0.00 as well as no effects after six months, F (2,9) = .35, p = .72, η^2 = 0.07. However, the effect sizes for the subordinates' OCB

[23] No changes appeared in transactional leadership behavior rated by the leaders themselves, F (2,14) = 1.98, p = .17, η^2 = 0.22.

three months after the workshop (d = .36), and six months after the workshop (d = .29) were small and positive.

Contrary to expectations, RM-ANOVA showed no significant effects for OCa, F (1,17) = 0.22, p = .65, η^2 = 0.01, as well as no effects for OCn, F (1,17) = .17, p = .68, η^2 = 0.01 after three months or after six months[24]. However, as expected no effects appeared for OCc after three months, F (1,17) = .09, p = .76, η^2 = 0.01 and after six months, F (2,9) = .29, p = .75, η^2 = 0.06. The effect sizes for the subordinates' OC are shown in table 21. Only OCa obtained a positive small effect sizes after six months (d = 0.32).

Table 21: Effect Sizes for Followers' Attitudes of Study I

	Intervention group	
	T1 to T2	T1 to T3
OCB	0.36	0.29
OCa	0.00	0.32
OCn	- 0.05	0.06
OCc	- 0.07	- 0.15

Thus, data of Study I suggests that hypothesis H3 can be partially accepted. The training intervention did influence the participants of this study such that they positively affected their subordinates' OCa after six months (H3a) and their subordinates' OCB after three months (H3d). As expected, OCc of subordinates did not improve after leaders did participate in the training intervention (H3c).

However, training intervention did not influence the participants of this study such that they positively affected their subordinates' OCn. Followers' OCn did not improve after their leaders participated in the training intervention (H3b).

4.1.4. Effects on Performance Appraisals by Supervisors

Results of the RM-ANOVA showed significant effects (Time x Group) for three of the four subscales of supervisors' performance appraisals. The effect was significant for job dedication, F (1,13) = 7.04, $p < .05$, η^2 = .35, for technical-administrative tasks performance, F (1,13) = 4.79, $p < .05$, η^2 = .27, and for leadership performance tasks, F

[24] Between T1 and T3, there was no data of the control group available. RM-ANOVA with inner subject factor ‚time' revealed no significant effects of OCa, F (2,9) = 0.14, p = .87, η^2 = 0.03, as well as no effects of OCn, F (2,9) = .03, p = .97, η^2 = 0.01.

(1,13) = 7.31, $p < .05$, $\eta^2 = .36$. Only for the subscale interpersonal facilities no significant effects were found, F (1,13) = 2.65, $p = .13$, $\eta^2 = .17$.

As expected, the subscales job dedication (d = 1.19), technical-administrative performance tasks (d = 1.46), and leadership performance tasks (d = 1.70) showed large effect sizes, whereas the subscale interpersonal facilities (d = 0.50) showed a medium effect size (see table 22). As correlations of data in the control group did not allow for the corrected calculation of the effect sizes, a more simple form was used instead (see formula 1.2).

Table 22: Effect Sizes for Performance Appraisals of Study I

	Intervention group	
	T1 to T2 (*simple d*)	T1 to T2 (*corrected d*)
job dedication	0.98	1.19
interpersonal facilities	0.47	0.50
techn.-adm. task performance	0.79	1.46
leadership task performance	0.92	1.70
	control group	
	T1 to T2 (*simple d*)	
job dedication	- 1.26	
interpersonal facilities	- 0.90	
techn.-adm. task performance	- 1.49	
leadership task performance	- 1.22	

Thus, findings suggest that hypothesis H4 can be accepted. The training intervention had a positive effect on the participants such that their supervisors perceived an improvement in their performance in job dedication (H4a), interpersonal facilities (H4b), technical-administrative task performance (H4c) and leadership task performance (H4d) three months after leaders participated in the training intervention.

4.2. Effects of Intervention (Results of Study II)

With regard to Study II, descriptive statistics for all variables at pretest and posttests are presented in table 23. Intercorrelations for all variables can be found in table 24.

Table 23: Descriptives Statistics of Study II

		Intervention group							
		Pretest		Posttest (T2)		Posttest (T3)		Posttest (T4)	
	Variable	M	*SD*	M	*SD*	M	*SD*	M	*SD*
1.	TFL	3.76	*0.30*	4.11	*0.27*	4.04	*0.30*	4.09	*0.21*
2.	TAL	3.11	*0.30*	2.98	*0.35*	2.99	*0.32*	3.04	*0.31*
3.	LF	1.75	*0.35*	1.46	*0.32*	1.55	*0.33*	1.72	*0.40*
4.	OCa	3.45	0.35	3.29	0.26	3.29	0.30	----------	
5.	OCn	2.77	0.54	2.59	0.58	2.74	0.65	----------	
6.	OCc	2.84	0.42	2.79	0.74	2.76	0.58	----------	
7.	Perf. 1	4.20	*0.40*	4.26	*0.40*	4.17	*0.49*	----------	
8.	Perf. 2	4.04	*0.66*	4.69	*0.52*	4.16	*0.54*	----------	
9.	Perf. 3	4.06	*0.28*	4.18	*0.41*	4.11	*0.47*	----------	
10.	Perf. 4	4.06	*0.52*	4.19	*0.49*	4.14	*0.51*	----------	
		Control group							
		Pretest		Posttest (T2)		Posttest (T3)			
	Variable	M	*SD*	M	*SD*	M	*SD*		
1.	TFL	3.75	*0.38*	3.85	*0.34*	3.78	*0.53*	----------	
2.	TAL	3.07	*0.34*	3.08	*0.28*	3.08	*0.25*	----------	
3.	LF	1.67	*0.49*	1.72	*0.49*	1.84	*0.60*	----------	
4.	OCa	3.56	0.38	3.40	0.31	3.46	0.53	----------	
5.	OCn	2.90	0.39	3.41	0.43	3.17	0.64	----------	
6.	OCc	3.20	0.55	3.03	0.54	2.77	0.26	----------	
7.	Perf. 1	4.16	*0.58*	3.83	*1.27*	4.07	*0.70*	----------	
8.	Perf. 2	4.20	*0.71*	4.03	*1.27*	4.40	*0.28*	----------	
9.	Perf. 3	4.06	*0.53*	3.79	*1.17*	3.96	*0.90*	----------	
10.	Perf. 4	4.21	*0.44*	4.03	*0.91*	4.10	*0.85*	----------	

Note: The means of TFL (transformational leadership), TAL (transactional leadership) and LF (laissez-faire leadership) are the means of all raters (self, supervisor, subordinates and peers). OCB (organizational citizenship behavior), OCa (organizational commitment affective), OCn (organizational commitment normative), OCc (organizational commitment calculative) were rated by subordinates. The four variables Perf. 1 to 4 refer to the four scales of supervisors performance appraisal (Perf. 1 = job dedication, Perf. 2 = interpersonal facilities, Perf. 3 = technical-administrative task performance and Perf. 4 = leadership task performance).

Participants of the intervention group show improvements in transformational leadership behavior after three months already, whereas they decrease in transactional leadership behavior. Whilst findings of the intervention group, in general, suggest slight improvements in supervisors' performance appraisals, means of the control group decrease. Means of subordinates' OC are inconsistent.

Table 24: Intercorrelations of Dependent Variables within the Intervention Group of Study II.

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Leadership style											
1.	TFL	1	.11	-.52***	-.03	-.23	-.34	.15	.28	.17	.24
2.	TAL	.21***	1	.05	.41*	.12	.13	-.20	-.47**	-.29	-.53**
3.	LF	-.51***	.10	1	.23	.30	.47**	-.34	-.23	-.28	-.42
Followers' attitudes											
4.	OCa	.00	.01	.23	1	.72***	.55***	-.29	-.29	-.29	-.24
5.	OCn	.16	-.02	.17	.62***	1	.78***	-.41	-.40	-.40	-.33
6.	OCc	-.09	-.30	.25	.35*	.52***	1	-.52	-.29	-.56*	-.45
Performance appraisal by supervisor											
7.	Perf. 1	.14	-.22	-.33	-.51*	-.18	.04	1	.65***	.93***	.78***
8.	Perf. 2	.33	-.08	.20	.01	-.03	.05	.34	1	.58***	.72***
9.	Perf. 3	-.03	-.29	-.10	-.42	-.00	.31	.55***	.08	1	.87***
10.	Perf. 4	.05	-.39*	-.12	-.46*	-.19	.24	.52***	.58***	.53***	1

Note: Under diagonal are correlations before the intervention, above diagonal are correlations three months after the trainings intervention. TFL (transformational leadership), TAL (transactional leadership), LF (laissez-faire), OC (organizational commitment, affectiv, normative, calculative), Perf. 1 (job dedication), Perf. 2 (interpersonal facilities), Perf. 3 (technical-administrative task performance), Perf. 4 (leadership tasks performance). * p < .10, ** p < .05, *** p < .01

A normal distribution was found for both groups at all points-in-time in the dependent variables transformational leadership, transactional leadership, OC and all four scales of performance appraisals. Thus, the premises for analyses of variance were given. Analyses of variance suggest that groups did not differ significantly in any of the variables at T1.

4.2.1. Effects on Perception of Transformational Leadership

Firstly, improvements of the experimental group compared to the control group were tested by using RM-ANOVA for the first three points-in-time. A significant effect (Time x Group) was obtained for the perception of transformational leadership measured by all perspectives (self, supervisor, peers, subordinates), F (2,83) = 6.79, $p < .01$, $\eta^2 = 0.14$. Post hoc analyses (Bonferroni) revealed that in pairwise comparisons there were significant differences between T1 and T2 ($p < .01$) as well as between T1 and T3 ($p < .01$). Furthermore, groups differed significantly at T2 ($p < .05$) and marginally significant at T3 ($p < .10$). Also significant effects were found for ratings from subordinates only, F (2,20) = 16.98, $p < .00$, $\eta^2 = 0.63$, and from supervisors only, F (2,15) = 7.26, $p < .01$, $\eta^2 = 0.49$[25]. As no control group data was available for T4, a RM-ANOVA with inner subject factor 'Time' was calculated and revealed a significant effect, F (3,33) = 9.52, $p < .00$, $\eta^2 = 0.46$. Post hoc analyses revealed significant differences between T1 and T2 ($p < .01$), T1 and T3 ($p < .01$) and between T1 and T4 ($p < .01$).

Secondly, effect sizes were calculated to detect changes over time in the trained behavior transformational leadership. Table 25 presents effect sizes for transformational leadership styles. Large effect sizes are obtained from the perspectives of subordinates, supervisors and from all perspectives in the perception of transformational leadership of the intervention group. Effect sizes of the control group showed a decrease in transformational leadership after three months and no changes after six months when measured by all perspectives.

[25] Interestingly, these effects could not be obtained for ratings for the perspective of leaders themselves. Participants of training declined in their ratings for transformational leadership.

Table 25: Effect Sizes for Transformational Leadership in Study II

	Intervention group		
	T1 to T2	T1 to T3	T1 to T4
TFL (all perspectives)	1.79	1.20	1.27
TFL (subordinates)	3.13	2.07	1.23
TFL (supervisors)	2.54	1.60	1.83
	Control group		
	T1 to T2	T1 to T3	
TFL (all perspectives)	- 0.26	0.09	
TFL (subordinates)	0.22	0.86	
TFL (supervisors)	0.14	- 0.32	

Thus, hypothesis H1 can be accepted. The training intervention improved transformational leadership behavior already three months and still six months after the training intervention. This effect staid on even nine months after the first training intervention. Subordinates' ratings of transformational leadership (H1a), supervisors' ratings (H1b) and ratings from all perspectives (H1c) increased significantly after leaders had participated in the training intervention.

4.2.2. Effects on Perception of Transactional Leadership

As expected, the RM-ANOVA for the untrained variables (transactional leadership style) from T1 to T3 revealed no significant effects (Time x Group), F (2,83) = 0.65, p = .52, η^2 = 0.02. This was also found for ratings of the different perspectives separately[26]. The calculation of effect sizes showed no improvement in the transactional styles of the leaders (table 26) after the training intervention.

Table 26: Effect Sizes for Transactional Leadership in Study II

	Intervention group		
	T1 to T2	T1 to T3	T1 to T4
TAL (all perspectives)	- 0.63	- 0.48	- 0.21
TAL (subordinates)	- 0.45	- 0.94	- 0.90
TAL (supervisors)	- 0.99	- 0.11	- 0.37
	Control group		
	T1 to T2	T1 to T3	T1 to T4
TAL (all perspectives)	0.18	- 0.04	
TAL (subordinates)	- 0.04	0.17	
TAL (supervisors)	0.19	- 0.35	

[26] No effects were found for subordinates' ratings, F (2,20) = 0.08, p = .92, η^2 = 0.01 or for supervisor ratings, F (2,15) = 1.43, p = .27, η^2 = 0.16.

Thus, hypothesis H2 can be accepted. The training intervention had no positive influence on the transactional leadership behavior of the participants when leadership behavior was perceived by subordinates (H2a), supervisors (H2b) or all raters (H2c). Whereas participants of the training group showed an increase in the trained behavior (transformational leadership), they showed no improvement of the untrained behavior (transactional leadership).

4.2.3. Effects on Subordinates' Attitudes

With regard to OC, RM-ANOVA showed no significant effects (Time x Group) for OCa, F (2,8) = 0.98, p = .41, η^2 = 0.19, as well as no effects for OCn, F (2,8) = 0.22, p = .81, η^2 = 0.05 and no effects for OCc, F (2,8) = 1.49, p = .28, η^2 = 0.27 from T1 to T3. As this might be due to low power, RM-ANOVA was calculated for two points-in-time only. Again, no significant effects could be obtained[27]. The effect sizes for the subordinates' OC are shown in table 27. Contrary to expectations, no improvements could be obtained for OCa and OCn. However, the lack of improvement of OCc was according to expectations and is in line with results of Study I.

Table 27: Effect Sizes for Organizational Commitment of Study II

	Intervention group	
	T1 to T2	T1 to T3
OCa	- 0.59	- 0.48
OCn	- 0.37	- 0.05
OCc	- 0.96	- 0.14
	Control group	
	T1 to T2	T1 to T3
OCa	- 0.37	- 0.22
OCn	0.09	0.56
OCc	- 0.27	- 0.06

Thus, hypothesis H3 can only partially be accepted. As expected, the training intervention did not influence the participants of this study such that

[27] RM-ANOVA with inner subject factor ‚time' and between subject factor ‚group' between time 1 and time 2 revealed no significant effects for OCa, F (1,15) = 0.07, p = .80, η^2 = 0.01, as well as no effects for OCn, F (1,15) = 0.71, p = .41, η^2 = 0.05 and no effects for OCc, F (1,15) = 0.00, p = .96, η^2 = 0.00

they positively affected their subordinates' OCc. However, contrary to expectations followers' OCa and OCn did not improve after their leaders participated in the training intervention. In fact, followers' OCa and OCn decreased over time.

4.2.4. Effects on Performance Appraisals by Supervisors

Results of the RM-ANOVA showed a marginal significant effect (Time x Group) after six months only for the subscale Leadership Performance Task, F (2,7) = 4.27, $p < .10$, $\eta^2 = .55$. Post hoc analyses revealed that the experimental group changed significantly in Leadership Performance Tasks between T1 and T2 ($p = .05$) and between T1 and T3 ($p < .05$) even when the power was very low.

As power was very low ($N = 8$), a RM-ANOVA was calculated between T1 and T2 with $N = 17$. This analysis revealed significant effects (Time x Group) for all of the four subscales of supervisors' performance appraisals after three months. The effect was marginally significant for interpersonal facilities, F (1,16) = 2.99, $p = .10$, $\eta^2 = .16$, highly significant for technical-administrative tasks performance, F (1,16) = 8.72, $p < .01$, $\eta^2 = .35$, and significant for job dedication, F (1,16) = 5.17, $p < .05$, $\eta^2 = .24$ and leadership tasks performance, F (1,15) = 6.65, $p < .05$, $\eta^2 = .31$.

Table 28: Effect Sizes of Supervisors' Performance Appraisals in Study II

	intervention group (simple d)		intervention group (corrected d)	
	T1 to T2	T1 to T3		
job dedication	.15	-.07	.31	- .11
interpersonal facilities	.59	.19	1.28	.41
techn.-administrative task performance	.35	.12	.36	.11
leadership task performance	.27	.17	.54	.31
	Control group (simple d)		Control group (corrected d)	
	T1 to T2	T1 to T3	T1 to T2	
job dedication	-.33	-.14	- .36	
interpersonal facilities	-.16	.37	- .23	
techn.-administrative task performance	-.30	-.13	- .48	
leadership task performance	-.25	-.16	- .46	

Effect sizes are shown in table 28. Leaders of the intervention group improved after three months in all scales with small, medium and large effect

sizes, respectively whereas the control group showed negative effect sizes after three months. After six months small effect sizes appeared for the intervention group only in interpersonal facilities and leadership task performance.

Thus, hypothesis H4 can be accepted. The training intervention had a positive influence on the participants such that their supervisors perceived an improvement in their performance in job dedication (H4a), interpersonal facilities (H4b), technical-administrative task performance (H4c) and leadership task performance (H4d) three months after leaders had participated in the training intervention.

4.3. Influences of Moderators (Results of Study I and II)

To detect effects of possible moderators, the sample was split respectively at the median of a possible moderator (SM: sensitivity, self-presentation; EI: others' emotional appraisal, use of emotion). With regard to the small sample sizes resulting from the median split, moderators were investigated for the combined sample of both studies with respect to the dependent variables perceived transformational leadership and performance appraisals.

As some changes in dependent variables showed unequal devolutions in the two samples, effects of moderators were only tested in cases when the separate samples showed similar trends. This can be stated for transformational leadership between T1 and T3 as transformational leadership improved in both intervention groups after six months. Furthermore, a similar trend was found for performance appraisals between T1 and T2 as participants of the intervention group improved in both samples after three months.

As OCB was only investigated in Study I, effects of moderators were tested only for the sample of Study I. Findings for OC were inconsistent in both samples. Therefore, influences of moderators were not investigated for this dependent variable.

RM-ANOVA and effect sizes were used to investigate the data. In order to analyze the influence of potential moderators, a RM-ANOVA was conducted with the inner subject factor 'Time' and the two between subject factors 'Group' and 'Moderator' (high on moderator vs. low on moderator). Respectively, the most important interaction effect (Time x Group x Moderator) was examined. When no data of a control group was available, the interaction 'Time x Moderator' was taken into account.

With regard to the separate samples, means of the moderators were comparable in both samples (see Apendix G). Only in respect of others emotional appraisal, mean in Study I (M = 2,93) was extensively larger than in Study II (M = 1,95). Descriptives of the combined sample can be found in table 29. Table 30 presents intercorrelations of the variables.

Table 29: Descriptives Statistics of Combined Samples

		Intervention group					
		Pretest		Posttest (T2)		Posttest (T3)	
	Variable	M	*SD*	M	*SD*	M	*SD*
1.	TFL	3.66	*0.45*			3.91	*0.38*
2.	OCB	3.47	*0.27*	3.52	*0.21*	3.57	*0.39*
3.	Perf. 1	4.08	*0.53*	4.41	*0.50*	----------	----------
4.	Perf. 2	3.94	*0.72*	4.30	*0.75*	----------	----------
5.	Perf. 3	3.92	*0.64*	4.28	*0.54*	----------	----------
6.	Perf. 4	3.72	*0.90*	4.24	*0.69*	----------	----------
7.	SM (SEN)	3.25	*0.27*	----------	----------	----------	----------
8.	SM (SP)	3.01	*0.45*	----------	----------	----------	----------
9.	EI (OEA)	2.42	*0.78*	----------	----------	----------	----------
10.	EI (UOE)	2.26	*0.95*				

		Control group			
		Pretest		Posttest (T2)	
	Variable	M	*SD*	M	*SD*
1.	Perf. 1	4.28	*0.57*	4.04	*0.92*
2.	Perf. 2	4.28	*0.71*	3.98	*0.92*
3.	Perf. 3	4.24	*0.58*	3.96	*0.91*
4.	Perf. 4	4.30	*0.49*	4.00	*0.67*
5.	SM (SEN)	3.17	*0.24*	----------	----------
6.	SM (SP)	2.93	*0.43*	----------	----------
7.	EI (OEA)	2.22	*0.96*	----------	----------
8.	EI (UOE)	1.89	*0.68*		

Note: The means of TFL (transformational leadership) are the means of all raters (self, supervisor, subordinates and peers). OCB (organizational citizenship behavior) was rated by subordinates of study I. The four variables Perf. 1 to 4 refer to the four scales of supervisors performance appraisal (Perf. 1 = job dedication, Perf. 2 = interpersonal facilities, Perf. 3 = technical-administrative task performance and Perf. 4 = leadership task performance). SM (SEN) refers to the subscale sensitivity of self-monitoring, SM (SP) refers to the subscale self-presentation of self-monitoring. EI (OEA) and EI (UOE) refer to the subscales others' emotional appraisal and use of emotion of emotional intelligence.

A normal distribution was found for both groups at all points-in-time in the dependent variables transformational leadership and three scales of performance appraisals. Thus, the premises for analysis of variance were given. Only Leadership Task Performance was not normally distributed ($p<.10$). However, analysis of variance is relatively robust against this violation of requirements. Accordingly, it was refrained from using another procedure. Analysis of variance suggests that groups did not differ significantly in any of the variables at T1. The separate investigation of both samples regarding effects of moderators did not reveal significant findings.

Table 30: Intercorrelations of Dependent Variables within the Intervention Group of Combined Samples.

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Leadership Style											
1.	TFL [b)]	1	-.02	-.04	-.15	.30*	.25	-.08	.07	-.01	.13
Moderator											
2.	SEN [c)]	.31**	1	.23	.26	.05	.07	.13	-.03	.06	-.08
3.	SP [c)]	.34***	.23	1	.38**	.28*	.10	.08	-.02	.09	-.10
4.	OEA [c)]	.06	.26*	.38**	1	.12	-.31	.20	.19	.07	.16
5.	UOE [c)]	.27**	.05	.28*	.12	1	.18	.14	-.02	.05	-.09
Followers' attitude											
6.	OCB [b)]	-.13	.14	.12	.04	.16	1	.24	-.06	.04	.06
Performance appraisal by supervisor											
7.	Perf. 1 [a)]	.46**	.10	.08	.07	-.10	.01	1	.66***	.84***	.75***
8.	Perf. 2 [a)]	.35	.05	.13	.05	-.08	.21	.62***	1	.66***	.85***
9.	Perf. 3 [a)]	.40**	.09	-.06	.00	-.44*	.11	.76***	.46**	1	.85***
10	Perf. 4 [a)]	.38**	.08	-.33	.03	-.36	.17	.69***	.60***	.88***	1

Note: Under diagonal are correlations before intervention, above diagonal are correlations with performance appraisal a) three months after the training intervention and with leadership style and subordinates' attitudes b) six months after the training intervention, c) before the training. TFL (transformational leadership), SEN (sensitivity of self-monitoring at T1), SP (self-presentation of self-monitoring at T1), OEA (others' emotional appraisal of emotional intelligence), UOE (use of emotion of emotional intelligence), OCB (organizational citizenship behavior of Study I), Perf. 1 (job dedication), Perf. 2 (interpersonal facilities), Perf. 3 (technical-administrative task performance), Perf. 4 (leadership task performance); * p < .10, ** p < .05, *** p < .01.

4.3.1. Influence of Self-monitoring

First, to test the moderating effects of sensitivity and self-presentation on the perception of transformational leadership, RM-ANOVAs with between factor 'Moderator' and inner subject factor 'Time' were conducted for data of the intervention group as there was no control group data available for Study I at T3. Results showed no significant effects whether for sensitivity, F (1,72) = 1.52, p = .22, η^2 = .02 nor for self-presentation as moderator, F (1,72) = 0.34, p = .56, η^2 = .01. Results regarding the effect sizes can be found in table 31. Contrary to expectations, participants did improve in transformational leadership regardless of leader's self-monitoring.

Thus, hypotheses H5a and H5d cannot be accepted. Neither sensitivity (H5a) nor self-presentation (H5d) moderate the relationship between training and leaders' effectiveness such that leader improve their transformational leadership behavior when Self-monitoring (Sensitivity: H5a, Self-Presentation: H5d) is high and does not improve when Self-monitoring (Sensitivity: H5a, Self-Presentation: H5d) is low.

Second, OCB of followers in Study I was investigated. RM-ANOVA with between subject factors 'Moderator' and inner subject factor 'Time' revealed no significant effects for sensitivity, F (1,16) = 0.36, p = .57, η^2 = .02 and for self-presentation, F (1,16) = 0.03, p = .87, η^2 = .00 after three months[28]. However, effect sizes point into the right direction with respect to self-presentation (see table 31). Participants high on self-presentation yielded high effect sizes (d = .98 to 2.66) whereas participants low on self-presentation did not enhance their followers' OCB after training (d = .01 to d = .17).

Consequently, findings weakly support hypothesis H5f. Self-presentation moderates the relationship between training and followers' OCB such that followers' OCB improved when self-presentation is high and do not improve when self-presentation was low. However, findings do not support hypothesis H5c. Sensitivity does not moderate the relationship between training and

[28] Also after six months no effects could be obtained for sensitivity, F (2,8) = .23, p = .80, η^2 = .05 and for self-presentation, F (2,8) = .25, p = .79, η^2 = .06.

followers' OCB such that followers' OCB improved when sensitivity was high and did not improve when sensitivity was low.

Third, the moderating effect on performance appraisals by supervisor was investigated. RM-ANOVA with inner subject factor 'Time' and between subject factors 'Group' and 'Moderator sensitivity' revealed no effects for the dependent variables job dedication, F (1,19) = 2.49, p = .13, η^2 = .12; technical-administrative performance tasks, F (1,19) = 2.60, p = .12, η^2 = .12 and leadership task performance, F (1,19) = 1.17, p = .29, η^2 = .00. Only for interpersonal facilities, a significant effect could be obtained, F (1,19) = 6.30, p < .05, η^2 = .25. However, this effect was contrary to expectations. Low self-monitors (sensitivity) improved significantly more than high self-monitors. No effects could be found for the moderator self-presentation[29]. Results of effect sizes can be found in table 31.

Table 31: Effect Sizes with Regard to Self-Monitoring as a Potential Moderator

	Intervention group			
	high sensitivity	low sensitivity	high self-presentation	low self-presentation
TFL (T1 to T3)	0.61	0.65	0.79	1.01
OCB (T1-T2)	0.26	0.50	0.98	0.17
OCB (T1-T3)	0.27	0.23	2.66	0.04
job dedication	1.01	1.37	0.78	1.72
interp. facilities	1.02	3.80	0.50	0.63
tech.-admin. task	0.44	1.90	1.05	1.30
leadership task	0.62	5.77	1.50	0.86
	Control group			
	high sensitivity	low sensitivity	high self-presentation	low self-presentation
job dedication	-0.05	-3.07	-2.27	-0.07
interp. facilities	0.50	-1.84	0.31	-0.16
tech.-admin. task	-0.08	-0.86	-2.16	0.04
leadership task	-0.32	-2.08	-0.73	-0.05

Note: Effect sizes for the data after sample was split at the median of sensitivity, respectively at the median of self-presentation. With regard to TFL (transformational leadership), there was only data from Study II available. Thus, it was not obtained within the calculation of the overall effect sizes. Data of OCB (organizational citizenship behavior) result of data from Study I only.

[29] For the moderator self-presentation, analysis of variance revealed no effect for the dependent variables job dedication, F (1,23) = 0.06, p = .81, η^2 = .00; interpersonal facilities, F (1,23) = 1.3, p = .26, η^2 = .05; technical-administrative performance tasks, F (1,23) = 0.00, p = .94, η^2 = .00; and leadership task performance, F (1,22) = 0.06, p = .81, η^2 = .00

Consequently, findings do not support hypotheses H5b and H5e. Neither sensitivity (H5b) nor self-presentation (H5e) moderate the relationship between training and leaders' performance appraisal such that supervisors' performance appraisals improved when self-monitoring was high and did not improve when self-monitoring was low.

In summary, findings suggest only one moderating effect of leaders' self-monitoring. Leaders high on self-presentation improved with regard to their followers' OCB (H5f). Influences of self-monitoring on the development of transformational leadership (H5a, H5d) and on supervisors' performance appraisals (H5b, H5e) as well as influences of sensitivity on followers' OCB (H5c) could not be obtained.

4.3.2. Influence of Emotional Intelligence

First, to test the moderating effect of EI on the perception of transformational leadership, a RM-ANOVA with between subject factor 'Moderator' and inner subject factor 'Time' was conducted. Results showed no significant effects[30]. Results regarding the effect sizes can be found in table 32. Effect sizes did not vary with regard to leaders' EI.

Thus, hypotheses H6a and H6d cannot be accepted. EI does not moderate the relationship between training and leaders' effectiveness such that leader improve their transformational leadership behavior when EI (others' emotional appraisal: H6a, use of emotion: H6d) is high and does not improve when EI is low.

Second, OCB of followers in Study I was investigated. RM-ANOVA with between subjects factors 'Moderator' and inner subject factor 'Time' between T1 and T3 revealed no significant effects for others' emotional appraisal, F (2,8) = 0.86, p = .46, η^2 = .18 and for use of emotions, F (2,8) = 0.45, p = .65,

[30] For the moderator others' emotional appraisal, RM-ANOVA revealed no effect for the dependent variables transformational leadership, F (1,99) = 1.65, p = .20, η^2 = .02; for the moderator use of emotion, RM-ANOVA also showed no effect, F (1,107) = 1.21, p = .27, η^2 = .01.

η^2 = .10. However, effect sizes point into the right direction with respect to others' emotional appraisal (see table 32).

Consequently, findings do partially support hypothesis H6c. EI (others' emotional appraisal) moderates the relationship between training and followers' OCB such that followers' OCB improved after three months when others' emotional appraisal of the leader was high and did not improve when others' emotional appraisal of the leader was low. However, findings do not support hypothesis H6f. EI (use of emotion) does not moderate the relationship between training and followers' OCB such that followers' OCB improved when use of emotion was high and did not improve when use of emotion was low.

Third, the potential moderating effect on performance appraisals by supervisors was investigated. Analysis of variance revealed no effects[31]. Results of effect sizes can be found in talbe 32. Contrary to expectations, participants of the intervention group did improve in superiors' performance appraisals even when their EI was low.

With regard to these findings, data does not support hypotheses H6b and H6e. Others' emotional appraisal does not moderate the relationship between training and supervisors' performance appraisals such that supervisors' performance appraisals improved when others' emotional appraisal was high and did not improve when others' emotional appraisal was low (H6b). Respectively, use of emotions does not moderate the relationship between training and supervisors' performance appraisals (H6e).

[31] For the potential moderator others' emotional appraisal, analysis of variance revealed no effect for the dependent variables job dedication, F (1,24) = 0.12, p = .74, η^2 = .00; interpersonal facilities, F (1,24) = 0.74, p = .40, η^2 = .03; technical-administrative performance tasks, F (1,24) = 0.25, p = .62, η^2 = .01; and leadership task performance, F (1,24) = 0.07, p = .78, η^2 = .00.
For the suggested moderator use of emotion, analysis of variance revealed no effect for the dependent variables job dedication, F (1,27) = 0.16, p = .69, η^2 = .01; interpersonal facilities, F (1,27) = 0.64, p = .43, η^2 = .02; technical-administrative performance tasks, F (1,27) = 0.38, p = .54, η^2 = .01; and leadership task performance, F (1,26) = 0.16, p = .69, η^2 = .01.

Table 32: Effect Sizes with Regard to Emotional Intelligence as a Potential Moderator

	Intervention group			
	high others' emotional appraisal	low others' emotional appraisal	high use of emotion	low use of emotion
TFL (T1 to T3)	1.10	0.75	0.92	0.88
OCB (T1-T2)	0.70	- 0.07	0.39	0.33
OCB (T1-T3)	0.01	0.40	0.30	0.27
job dedication	1.11	2.30	0.77	2.41
interp. facilities	0.75	0.61	0.75	0.39
tech.-admin. task	1.30	1.96	1.29	1.81
leadership task	1.86	1.15	1.39	1.75
	Control group			
	high others' emotional appraisal	low others' emotional appraisal	high use of emotion	low use of emotion
job dedication	-0.35	-0.35	-0.29	-0.21
interp. facilities	-0.18	-0.58	-0.19	-0.39
tech.-admin. task	-0.62	0.27	-1.11	-0.06
leadership task	-0.51	-0.29	-0.61	-0.33

Note: Effect sizes for the data after sample was split at the median of others' emotional appraisal, respectively at the median of use of emotion. With regard to TFL (transformational leadership), there was only data from Study II available. Thus, it was not obtained within the calculation of the overall effect sizes. Data of OCB (organizational citizenship behavior) result of data from Study I only.

In summary, only one moderating effect of the leaders' EI could be obtained. When leaders were high on others' emotional appraisal (EI) their followers improved their OCB three months after leaders had participated in the training intervention (H6c). Effects of EI on the development of transformational leadership (H6a, H6d) and on supervisors' performance appraisals (H6b, H6e) as well as influences of use of emotion on followers' OCB (H6f) could not be obtained.

4.4. Utility Analyses

In general, the value of interventions is estimated only using statistics which do not directly convey economic value. These statistics include the effect sizes or F and t statistics between training and control groups and their associated p-values as it was reported previously in this work. However, organizational decision makers are generally less able to evaluate these statistics than statements made in terms of dollars or euros (Schmidt, Hunter & Pearlman, 1982). The ability to state the value of training interventions in monetary impact on work force output is, therefore, an intriguing alternative tool for personnel psychologists. Even when it is only a rough estimate, it is an advantage that training costs can be considered in the evaluation.

Originally, utility analysis models were developed for applications with selection assessment procedures and have been applied most frequently in that context. However, later these models have also been applied in connection with development programs (e.g. Cascio, 1989; Schmidt et al., 1982).

Work by Brogden (1946; 1949) and by Cronbach and Gleser (1965) led to an utility model which is often referred to as Brogden-Cronbach-Gleser model. Under the assumption of a linear relationship between test results and the criterion job performance, the components of this utility analysis calculations for selection assessment include: (a) incremental utility of assessment procedure ΔU measured in Dollar or Euros; (b) the mean validity r_{xy} of the selection assessment, (c) the selection ratio employed p (i.e., the number of applicants selected to the number assessed), (d) the standard deviation of sales productivity as a percentage of mean productivity SD_{xy}, (e) the average tenure T of selected employees N_a, and (f) the cost of the procedure C per number of applicants N_b (Cronbach & Gleser, 1965):

$$\Delta U = T\, N_a\, r_{xy}\, SD_{xy}\, (\varphi/p) - N_b\, C \qquad (2.1)$$

With regard to the development programs, ΔU is the Dollar value of the training program (Schmidt et al., 1982). In this case, T is the number of years' duration of the training effect on performance. Furthermore, effect sizes d_t of the training intervention took the place of the mean validity and selection ratio.

SD_y stands for the standard deviation of job performance in dollars or euros of the untrained group. Finally, *N* denotes to the number of trainees and *C* stands for costs of the training intervention.

$$\Delta U = T\ N\ d_t\ SD_y - N\ C \qquad (2.2)$$

In the present piece of research, the cooperations did not reveal the real salaries of participants due to data security. Therefore, wages were estimated with regard to internet based calculators for the jobs 'chemical laboratory worker' and 'team leader in call centre' in May 2008 (http://www.gehaltsvergleich.com/berufe-t.html). Both job descriptions refer to the lower management of the respective corporation although also managers of the upper management were involved in the evaluation of the training program. Consequently, the estimation leads to a very conservative calculation of profit. The coefficient of variation for sales work SD_y was taken from the comprehensive meta-analytic research of 39 studies by Hunter and Schmidt (1982). Researchers found empirical support for the assertion that estimated SD_y usually falls between 40% and 70% of yearly salary or wage. Therefore, 40% of estimated wages are considered for the actual calculations, as it is the more conservative estimation.

Costs *C* were calculated on the basis of costs for feedback-reports plus charge for meeting room and catering plus trainers' fees per participant. Generally, utility analyses for trainings do not consider participants' labor time. In order to provide a very conservative calculation, estimated costs of participants' labor time (C_{lt}) were added. For this purpose, formula 2.3 was developed. Assuming 22 working days per month (WD = 22), costs resulting from participants' labor time were calculated as estimated salary per month (S_m) divided through 22 working days multiplied by days used for intervention (I).

$$C_{lt} = \frac{S_m\ I}{WD} \qquad (2.3)$$

In the present calculation, the number of years' duration of the training effect on performance *T* was not known. Furthermore, changes of effect sizes

over time were observed. In some cases effect sizes increased over time, whereas in other cases effect sizes decreased over time. It might be of interest to compare the return investment of a long-term, cost effective development program with a short-term development intervention. In regard to this fact, *T* was interpreted as the time period between pretest and posttest, which led to the according effect sizes. This can be seen as a relatively conservative calculation as these time periods are shorter than supposedly real duration of the training effect on performance.

The analyses are calculated with the effect sizes resulting from performance appraisals from supervisors. However, further utility analyses with effect sizes resulting from transformational leadership, respectively subordinates' attitudes can be found in Appendix H and I.

4.4.1. Results of Study I

Table 31 presents results of utility analysis with regard to the effect sizes resulting for performance appraisals of Study I. Leaders' annual salary was assumed as 30 000€ (chemical laboratory worker). On basis of supervisors' performance appraisals there is a high return on investment (76 500€) already three months after the training intervention.

Table 33: Utility Analysis on Basis of Effect Sizes of Performance Appraisals (Study I)

	After 3 months
N	25
C	570
SD_y	12 000
T	0.25
d	1.21
Utility	**76 500 €**

Note: N (number of participants), C (costs of intervention in Euro per participant), SD_y (standard deviation (40% of) of estimated annual salary in Euro), T (time after first intervention in years), d (mean effect size with regard to performance appraisal), Utility (calculated utility of intervention in Euros, see formula 2.2)

Further utility analyses calculated on the basis of other effect sizes (followers' OCB, transformational leadership) also result in considerable return on investments (see Appendix H).

4.4.2. Results of Study II

Table 34 provides results from utility analysis calculated with the effect sizes resulting from performance appraisals by supervisors of Study II. Costs differed from Study I as other standards for meeting room and catering were set. Furthermore, costs of labor time were calculated on the basis of slightly lower wages regarding this line of business. Accordingly, lower annual salary was assumed (team leader in call centre: 28 000€) compared to participants from Study I leading to lower SD_y.

As effect sizes are considerably lower than effect sizes with respect to transformational leadership, the return on investment is obviously lower. However, there is a positive return on investment already after three months.

Table 34: Utility Analysis on basis of Effect Sizes of Performance Appraisals (Study II)

	After 3 months	After 6 months
N	21	21
C	574	948
SD_y	11 200	11 200
T	0.25	0.50
d	0.62	0.18
Utility	**24 402 €**	**1 260 €**

Note: N (number of participants), C (costs of intervention in Euro per participant), SD_y (standard deviation (40% of) of estimated annual salary in Euro), T (time after first intervention in years), d (mean effect size with regard to performance appraisals), Utility (calculated utility of intervention in Euros, see formula 2.2)

An additional utility analysis calculated on the basis of other effect sizes of transformational leadership can be found in Appendix I. According to the larger effect size, this analysis results in larger, positive return on investments even after nine months.

5. Discussion

There has been a considerable body of research completed examining effects of transformational leadership training; nonetheless, the results of the present piece of research represents the first empirical long-term investigations regarding both effects of and influences on development of transformational leadership. Results of the two examined samples suggest that training managers in transformational leadership is effective and produces positive changes with regard to several aspects (see figure 6). Using a pretest-posttest control group design, RM-ANOVAs as well as effect sizes showed that leaders who received a training intervention improved in perceived transformational leadership and in performance appraisals, whereas leaders of the control group did not improve. In addition, whereas the training intervention exerted the positive effects on trained transformational leadership, the training intervention did not affect the untrained transactional leadership behavior of the participants. Additionally, in Study I effect sizes suggest some positive effects on subordinates' attitudes.

However, no moderating influences could be obtained in the combined sample. Both potential moderators did reveal only weak influences – apparent in effect sizes – on followers' OCB in Study I. The facet self-presentation of SM showed a weak influence on the improvement of followers' OCB. Furthermore, the facet others' emotional appraisal of EI conditioned a weak improvement of followers' OCB. However, general moderating influences on trainings effectiveness could not be supported.

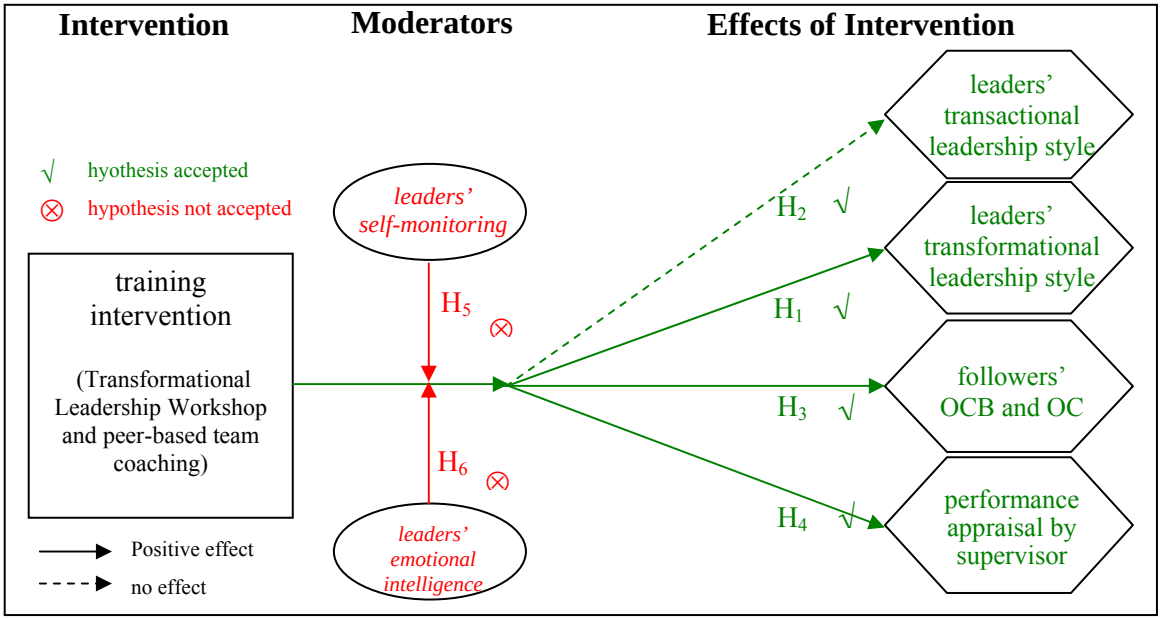


Figure 6: The New Picture with the Accepted and Unaccepted Hypotheses

5.1. Theoretical Implications

In the line with earlier research (Barling et al., 1996; Dvir et al., 2002; Frese et al., 2003; Kelloway et al., 2000; Rowold, 2008; Towler, 2003)[32], findings of the present work underline the notion that transformational leaders can be made. These findings speak for the feasibility of using training and feedback processes to promote transformational leadership. However, the present piece of research advances the understanding of transformational leadership development in several ways.

First, results replicate earlier findings (Barling et al., 1996; Kelloway et al., 2000), yet, in a different culture. Earlier investigations on North-American samples found that the systematical development of transformational leadership results in changes in subordinates' perception of managers' transformational leadership behavior (Barling et al., 1996; Kelloway et al., 2000). Although transformational leadership is in Germany sometimes regarded with scepticism and considered as an overemphasized North American phenomenon that cannot be easily transferred (Felfe et al., 2004), the positive effects of transformational leadership development could also be obtained in the two German samples of the present study. Hence, findings support the generalizibility of transformational leadership development across the North American and German cultures.

Second, the present piece of research extends previous research (Barling et al., 1996; Kelloway et al., 2000) by providing experimental evidence that development of transformational leadership results not only in changes in followers' perception of transformational leadership but also in changes in followers' OCB. Furthermore, Organ, Podsakoff and MacKenzie (2006) called for research investigating the causal relationship between transformational leadership and OCB. In general, it is assumed that leadership behaviors cause OCB to increase. However, it is also possible that followers' OCB might have caused leaders to provide more support or encouragement to employees who help others in the organization than to employees who do not engage in this form of OCB. In the latter case, OCB would have increased leaders' transformational leadership behavior. The present study manipulated transformational

[32] Whereas Barling et al. (1996) showed that Intellectual Stimulation could be trained, Frese and his colleagues (2003) as well as Towler (2003) demonstrated that their training interventions enhanced charismatic communication whereas Kelloway et al. (2000), Dvir et al. (2002) and Rowold (2008) provided evidence that training interventions had positive effects on perceived transformational leadership.

leadership through training and investigated OCB as a dependent variable. Regarding to the research design, findings provide first support for the general assumption that transformational leadership enhances OCB.

Unexpectedly, positive effects on another followers' attitude, namely, OC could not be obtained consistently whereas previous research did in an American sample (Barling et al., 1996). With regard to the training intervention by Barling et al. (1996), it is possible that only changing Intellectual Stimulation leads to effects on the outcome variable OC (Kelloway et al., 2000). However, only effect sizes of OCa in Study I point into the expected direction. For OCa and OCn of Study II as well as for OCn of Study I, the expected effects did not emerge. This might be due to the relatively low internal consistency of the measurement. Cronbachs' Alphas of Study I (α = .65, for OCa; α = .69, for OCn) and Study II (α = .45, for OCa) were below the conventional level of α = .70 for acceptance as internally consistent (Nunally, 1978).

Organizational influences such as stress might provide another explanation for the missing effects of training and enhanced transformational leadership on followers' OC. According to meta-analytical research (Meyer et al., 2002), OCa correlates negatively with self-reported stress (r = -.21). In fact, participants of both studies reported high workloads concerning all employees at the time of the investigation. Subordinates being exposed to high workloads anyway might have been stressed by the higher expectations of more transformational leaders after training and, therefore, did not increase, respectively decreased their OC. Interestingly, in data of Study I, it appeared that subordinates' attitudes did correlate negatively with performance appraisals by supervisors. This is intriguing as it suggests that leaders who improved in their supervisors' performance appraisals affect simultaneously a decrease in their subordinates' attitudes towards the organisation. However, it remains unclear if the lack of positive effects resulted from weak instruments, organizational circumstances or from other influences such as culture or training intervention. Because some effect sizes (OCa of Study I; OCc of Study I and II) point in the hypothesized direction, it is concluded that more testing is needed before revising the anticipated mechanism.

Third, the present piece of research extends previous research (Barling et al., 1996; Kelloway et al., 2000) as results demonstrate that development of transformational leadership leads to changes in supervisors' perception of managers' transformational leadership and to changes in leaders' performance appraisals by supervisors. Whereas

Rowold (2008) evaluated effects of a general management development program on performance appraisals, the present investigation provides first findings on the effects of systematical development of transformational leadership on performance appraisals. Lowe et al. (1996) propose that it can be seen as strong evidence that the effect of transformational leadership is much more than simple affective impressions about the leaders' effectiveness, if transformational scales are more strongly related to organizational performance appraisals than transactional scales. In both Study I and Study II, intercorrelations between transformational leadership and performance appraisals were higher than intercorrelations between transactional leadership and performance appraisals (at T1). Taken together, findings regarding performance appraisals by supervisors as well as findings regarding followers' OCB support Bass' (1985) assumption that transformational leaders have a positive influence on several levels of their environment. Not only subordinates but also supervisors perceive positive changes when transformational leadership is enhanced.

Fourth, research of the two present studies broadens our knowledge about transformational leadership development as it provides evidence that the effect on perceived transformational leadership maintained over nine, respectively twelve months. Earlier research proves that transformational training interventions show positive effects after five to six months (Barling et al., 1996; Dvir et al., 2002; Kelloway et al., 2000) or after a day or a week (Frese et al., 2003; Towler, 2003). Thus, the present study responds to some researchers' (Judge et al., 2006) call for studies of longer duration and proves the longevity of training effects. Actually, positive effects of training on the perception of transformational leadership persisted over a time period of twelve, respectively nine months.

Fifth, the aim of the present work was to follow another request of Judge et al. (2006). Researchers called for studies identifying more precisely when significant effects are expected to emerge. Thus, data was collected repeatedly allowing detecting more precisely when positive effects emerged. It seems to be intriguing that followers of Study II perceived an enhancement of transformational leadership behavior already after three months, whereas followers' of Study I did perceive this improvement not until six months after the training intervention. The last fact might be due to organizational events occurring between T1 and T2 in Study I. By that time, managers

had to lead annual performance reviews with their followers. These performance appraisals are linked to salary declaration, which might have been not satisfactorily to some of the leaders' followers. Potentially, this discontentedness might have caused more conservative ratings of leaders' transformational leadership behavior in order to punish leaders for unsatisfying performance reviews. With regard to this, positive effects of transformational leadership development could have been expected after three months already if there were no annual performance reviews as it appeared in Study II.

Finally, the present piece of research is advanced not only for its longevity and use of a control group but also for its additional usage of unequivalent dependent variable design (Cook & Campbell, 1979). Commonly used control group designs with a nontreatment control group can exclude the possibility of maturation and history effects but not for the possibility of a Hawthorne effect or a placebo effect. It remains uncertain if differences between intervention and control groups may reflect the expected effect of a certain training intervention or just an effect of self-reflection resulting from any intervention. However, the use of this unequivalent dependent variable design (Cook & Campbell, 1979) helps to control for the Hawthorne or the placebo effect (Goldstein, 1974). The present findings prove that participants of the training intervention improved the trained variables (transformational leadership behavior) whereas they did not improve the untrained variables (transactional leadership behavior). Consequently, there is evidence that the training intervention systematically caused an improvement of the targeted behaviors, which is not due to placebo effect, maturation or history effects.

In summary, the present investigation suggests that training managers in transformational leadership can be successful in Germany. It can be concluded that transformational leadership training can enhance transformational leadership behavior, general leadership performance and, thereby, followers' attitudes in organizational contexts.

5.2. Practical Implications

Results of the present work have at least three practical implications for the organizational development of leaders. First, leaders can be trained to become more transformational. This fact results in several positive effects for their organizations. On the one hand, this becomes apparent in results of utility analyses. After three months, changes due to training lead to an estimated return of investment between 76 500 (Study I) and 24 402 € (Study II). Thus, the positive effects of training lead to high estimates of return on investments, which suggest that the training has positive effects on the organization.

On the other hand, enhanced transformational leadership caused an increase of followers' OCB supporting Bass' (1985) claim that transformational leadership behavior leads to followers' performance beyond expectations. OCB is referred to as the individual contributions in the workplace that go beyond job-role requirements part of the job description (Organ & Ryan, 1995). A transformational leader is stated to cause followers to do more than they are expected to do (Yukl, 1994). Consequently, Graham (1988) sees the most important effects of transformational leaders on extra-role behavior, rather than on in-role behavior. This assumption is attended by the impact of OCB on organizational outcomes suggesting that transformational leadership might positively influence organizational success through OCB. Findings indicate that OCB has significant effects on performance and accounts for 17 to 29 percent of the variance in performance (Podsakoff & MacKenzie, 1994; Walz & Niehoff, 1996) as well as 17 percent of the variance in production quantity and 26 percent of variance in the production quality (MacKenzie et al., 2001; Podsakoff & MacKenzie, 1994). A recent study by Hauser, Schubert and Aicher (2007) found a relatively strong and significant correlation between employees' engagement –similar to OCB – and the success of the company (r =. 32). Furthermore, their investigation of 34 German organizations revealed that employee's engagement accounts for about 31 percent of variance (R^2 = .31) of organizational success (Hauser, Schubert & Aicher, 2007). Taken together, the development of transformational leadership is not only possible but also desirable for organizations as it supposedly supports organizational success.

Second, the extension of the Transformational Leadership Workshop – including 360-degree feedback – by PTC occurred to be a winning combination. Each method on its own has demonstrated its' efficiency in previous research. The Transformational

Leadership Workshop (Barling et al., 1996; Kelloway et al., 2000), the feedback intervention (Kelloway et al., 2000) and the PTC (Rowold, 2008) enhanced transformational leadership behavior.

With regard to effects on the control group in Study II, it can be assumed that providing 360-degree feedback reports without additional counselling does partially work to effect transformational leadership behavior. At least subordinates perceived a small improvement of transformational leadership behavior after three months (d = .22) and a large improvement after six months (d = .86), whereas these effects could not be obtained when transformational leadership was rated by all perspectives (d = -.26, d = .09). Guzzo, Jette, and Katzell (1985) report a mean effect sizes of d = .35 for appraisal and feedback, whereas Kluger and DeNisi (1996) report a mean effect size of d = .41 for the relationship between feedback and performance.

However, Kluger and DeNisi (1996) also found in their comprehensive meta-analysis that feedback intervention studies, generally, have not shown consistent improvement in performance. Specifically, they found that feedback interventions (i.e. giving feedback on an individual's performance or behaviour) not always improve performance. While it is true to say that, on average, feedback was associated with enhanced performance, about one third of the effects found were negative. It is assumed that feedback may actually detract from performance (Kluger & DeNisi, 1996). Although the incremental effect of each method has to be further investigated, the results of Study II demonstrate that the combination of all methods leads to higher effect sizes for perception of transformational leadership by subordinates (d = 3.13) than the isolated usage of 360-degree feedback (d = .22).

Furthermore, the efficiency of the combination is promising, especially with regard to general effects of other research of organizational training evaluations (Arthur Jr et al., 2003; van Dierendonck, Haynes, Borrill & Stride, 2007). Van Dierendonk and his colleagues found a decrease in performance evaluations by self-rating managers and their followers after feedback combined with a supporting workshop. Furthermore, results of a meta-analysis on organizational training effectiveness by Arthur, Bennett, Edens, and Bell (2003) revealed mean effect sizes of d = 0.62 for behavioral criteria (e.g. job performance). Thus, the effect sizes of the present piece of research were higher than effect sizes of organizational trainings in general. Taken together, the present leadership development program can be evaluated as very effective against the background of other organizational training evaluations.

Third, two facets of personality traits seem to be useful as selection criterias for participation in leadership development programs. Understanding how personal attributes, such as SM and EI, relate to the development of leadership styles does not only help scientists to identify and understand processes that support leadership development. It can also help organizations to identify candidates for transformational leadership training and match talents and strengths of managers to the needs of the organization (Sosik & Dinger, 2007). Findings of the present work suggest that leaders high on self-presentation as well as leaders high on others' emotional appraisal seem to be advantaged and profit faster by transformational leadership training than leaders low on these personal attributes. However, this advantage is only given for the effect on followers' OCB.

In summary, organizations can benefit from the investment in development of transformational leadership. The combination of the methods recommended by Bass (1990b) – group-based training and feedback processes – appear to be effective in developing transformational leadership. Last but not least, some personal traits suggest being useful for identification of leadership training candidates.

5.3. Limitations and Future Research

There are, of course, a number of limitations concerning the two presented studies. The most important ones regard the study samples. Firstly, the sample sizes of both studies are quite small. Even though this is typical for evaluations of leadership trainings in organizational contexts, research with lager samples is warranted.

Secondly, a random assignment of participants to the intervention or control group was not possible and limits the results. This is apparent especially in Study I, where the control group consisted only of upper level managers whereas the intervention group comprised in the majority middle level managers. The influences of such a systematical assignment to the intervention group and to the control group made by the organizations could have caused the positive effects in the intervention group and might have prevented effects in the control group. Future research is needed which replicates findings with random assigned samples in an experimental design.

Thirdly, there was no data available about control variables such as tenure, age or previous knowledge of the participants. Influences of such variables cannot be excluded. Some researchers (Colquitt, LePine & Noe, 2000) already found support for the assumption that variables such as participants' motivation to learn have an influence on the effectiveness of training. Future research is needed that controls for such variables (e.g. age, tenure).

Finally, the many dropouts limit the explanatory power of the results. Even though most reasons causing the dropouts (e.g. pregnancy, abrogation) did not systematically relate to the training intervention, the dropouts result in restrictings for statistical analyses. Furthermore, some dropout might have resulted from lack of motivation to administer the questionnaires over and over again. Future research should make use of incentives for participation to enhance motivation or limit the number of surveys to adhere the drive to administer questionnaires.

Additionally, some limitations derive from the measures used in the two studies. Firstly, all measures were based on social perceptions and, therefore, are open to response artefacts (e.g., social desirability bias), which may have affected the changes after training reported in the present studies. More precisely, it cannot be excluded that some raters knew that the managers they evaluated participated in a leadership development program and that this knowledge influenced their ratings. At least, supervisors knew who of their followers attended a leadership program and who

received only 360-degree feedback, respectively no feedback. The knowledge of leadership development intervention might have caused supervisors to rate leaders' performance more positive after the training only because they did expect participants to improve after training. With regard to this assumption, it is noticeable that performance appraisals in Study I were higher than performance appraisals in Study II. This fact might originate from the fact that supervisors of Study II are more used to continually evaluating their subordinates and to provide continuous feedback. The more distinct experience with questionnaires and evaluations might have affected supervisors of Study II to rate their leaders more conservatively. However, future research investigating effects on performance appraisals by supervisors should obscure the attendance of the leaders to leadership development programs.

Secondly, scientists still discuss whether the MLQ is the appropriate measure to assess transformational and transactional leadership (e.g. Yukl, 1999). Although the MLQ is the best established questionnaire measuring transformational and transactional leadership, the factor structure of the MLQ has often been re-examined (e.g. Heinitz, Liepmann & Felfe, 2005). Further criticism arises as effective leadership depends on the context. Thus, Yukl (1999) questions if a high frequency of transformational leadership behavior is appropriate and effective in all situations. On the one hand, long-experienced employees might benefit most from an intellectually stimulating leader who aims to adhere and improve quality. On the other hand, new employees often need to be led more transactionally by goal-setting and by monitoring as they might become overburden by a frequent intellectual stimulation in an already stimulating new environment. With regard to this, one can criticize the 5-point scale, which measures the frequency of a certain behaviour as not always appropriate.

Thirdly, the expected key findings regarding the moderator effects of SM and EI did not emerge in the present piece of research. With regard to SM, this might be due to the relatively low internal consistency of the measurement. Cronbachs' Alphas of Study I (α = .69, for self-presentation) and Study II (α = .62, for sensitivity; α = .40, for self-presentation) were below the conventional level of α = .70. With regard to Sosik and Dinger's (2007) research supporting the moderating effect of self-monitoring, it is concluded that more testing is warranted.

With regard to EI, Cronbachs' Alphas proved internal consistency in both studies. However, the construct itself still faces substantial criticism. Antonakis (2003) doubts that the construct is vital for leadership research as there has been relatively little

support for the link between emotional intelligence and leadership. Another issue of the criticism relates to the trait vs. ability debate and focuses on the many attempts by researchers to create a valid measure of emotional intelligence. As the measurements are based on various different conceptualizations and interpretations of the emotional intelligence construct, the debate has further confused. Most of the measurements are self-reports (e.g. EQ-i, TMMS, WLEIS). This is argued to be a weak form of evaluation for the measurement of individual abilities. Furthermore, all these self-report measurements closely correlated with personality measurements. Again, this fact adds up to the criticism of the construct emotional intelligence. Therefore, some researchers (Roberts, Schulze, Zeidner & Matthews, 2005) ask for training studies using objective measures to assess interventions.

In addition, several limitations accrue from the design used in the two studies. Firstly, in Study I a lot of data was missing from the control group. Thus, positive effects on perceived transformational leadership, on followers' attitudes and on performance appraisals by supervisors might have been due to effects of history or maturation. However, in Study II these effects could be tested. Participants of the intervention group did improve whereas participants of the control group, in general, did not improve. This fact speaks for the effectivity of the training intervention independently from history and maturation effects.

Secondly, participants of the intervention group did know that they received additional training interventions whereas participants of the control group received only feedback reports. This knowledge might have motivated the leaders of the intervention group to perform best whereas leaders of the control group became less motivated in correlation with the knowledge that they received less development interventions (Hochholdinger et al., 2008b). The present studies did not control for motivation to perform. Future research should implement a motivation check to control for this artefact of motivation to perform, respectively for this placebo effect.

Thirdly, some measurements demonstrated dissatisfying reliability (e.g. transactional leadership). Whereas some of the mentioned arguments referring to motivational artefacts or response artefacts could be attenuated by the results of unequivalent variable design, the lack of reliability referring to transactional leadership scales weakens this argument. With regard to the response artefact, it would be expected

that raters enhance all their behavior evaluations due to the knowledge, which leaders participated in training. However, results suggest that raters improved their ratings only in the trained variable (transformational leadership) whereas their ratings of the untrained variable (transactional leadership) did not improve. This fact speaks against the response artefact. With regard to the motivational artefact, it would be expected that participants of the intervention group were motivated and performed better in all behaviors. However, results suggest that participants of the intervention group improved selectively in the trained variable transformational leadership. This fact speaks against the motivational artefact. Inauspiciously, the transactional leadership scale demonstrated no satisfying reliability. Regardingly, the findings that participants of the intervention group selectively improved only in transformational leadership but not in transactional leadership might be due to the low reliability of the transactional leadership scale. This remarkably reduces the explanatory power of the internal reference variable. Future research is necessary to replicate the findings with reliable transactional leadership measurements.

Fourth, it was indirectly assumed that changes of transformational leadership behavior caused changes of followers' attitudes and supervisors' performance appraisals. However, absent intercorrelations after training contradict this assumption. Intercorrelations between transformational leadership and outcome variables did not enhance. Followers in Study I improved their OCB and supervisors improved their performance appraisal ratings even though they did not perceive an improvement of transformational leadership behavior. It is possible that training did enhance other behaviors of leaders, which were not controlled but had an impact on followers' attitudes and supervisors' performance appraisals. Possibly, followers' dissatisfaction with the annual performance reviews might have caused inaccurate ratings of leaders' transformational leadership behavior in order to punish leaders whereas leaders actually changed their transformational leadership behavior. This might explain the insignificant and low intercorrelations between followers' attitudes and perception of transformational leadership. Replications of the studies are needed that further clarify these findings by controlling such possible influences.

Fifth, both studies were conducted in companies of the service sector. Future research might assess whether the effects of transformational leadership development extend to other contexts such as the sector of industry.

Sixth, the settings of the present studies were organizational companies, which are known for being vulnerable for uncontrollable influences on research designs. Over the time of nine to twelve months multiple influences such as stress, high workloads, other training interventions or leaving of co-workers or followers interfere with the evaluated training intervention. The impact of such influences on the measured effects cannot be easily controlled in organizational settings. In laboratory settings, environmental effects can be controlled and reduced, yet, at the expense of external validity. Hence, replications in organizational settings are warranted that control possible influences by collecting more data and information about circumstances such as amount of workload and stress.

Seventh, results of the utility analyses provide only rough estimations of the return on investment. Several coefficients had to be estimated, as organizational data could not be obtained due to data protection. Future research could profitably include actual data concerning salary to estimate the return on investment.

Finally, the incremental impact of the single follow-up sessions remains unclear. It cannot be concluded whether the Transformational Leadership Workshop alone caused long-term changes or if follow-ups are necessary for the longevity of positive effects. Future research is needed examining the incremental use of follow-ups or the longevity of only one single intervention.

Beside the eliminations of the limitations concerning samples and research design, future research is required that furthers our knowledge regarding the development of transformational leadership. Firstly, future research should investigate effects on objective performance outcomes. Barling and his colleagues (1996) investigated amongst other variables the personal loan sales and credit card sales as objective performance criteria. Their findings need to be replicated in German samples. As subjective performance measures are not equivalent to objective performance (Bommer, Johnson, Rich, Podsakoff & MacKenzie, 1995), future research should expand the focus on outcomes such as management ratios regarding followers' absenteeism or objective performance.

Secondly, the processes by which transformational leadership is enhanced are worth investigating. Still, little is known about the processes that facilitate and variables that permit the enhancement of transformational leadership development. Hence, further

variables such as the locus of control, learning motivation or self-efficiacy need to be investigated (Hochholdinger et al., 2008a).

Thirdly, more levels of evaluations could be examined to detect the impact of transformational leadership development. In terms of Kirkpatrick's (1976) four evaluation criteria, the present work has systematically investigated only criterion three: the behavior being taught in training interventions, and criterion four: results of training in the organization such as followers' attitudes. Future research might additionally investigate the reaction right after training (criterion one) and effects on declarative knowledge about transformational leadership (criterion two). Indeed, the more important criteria three and four are investigated in the present study. However, checking for the declarative knowledge about transformational leadership can help to understand if improvements of performance appraisals by supervisors are related to the actual improvement of transformational leadership knowledge and behavior or to some other changes in participants.

In conclusion, although the present results must be replicated using, for example, larger samples, experimental designs and different outcome or moderator variables, the present piece of research suggests that the development of managers in transformational leadership behavior may well exert significant positive effects. In line with previous research (Barling et al., 1996; Kelloway et al., 2000), the present work extends the usefulness of transformational leadership (Barling, 1996).

6. References

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Appendix

A. Multifactor Leadership Questionnaire

The MLQ items (and de MLQ Feedback Report) are copyright protected and are obtainable by the author or Jens Rowold.

B. Questionnaire for the Assessment of Subordinates' Organizational Citizenship Behavior

Fragebogen Mitarbeiter
(Qestionnaire subordinates)

Lieber Mitarbeiter,

dieser Fragebogen erhebt Ihre Verbundenheit mit Ihrem Unternehmen und Ihr Engagement. Bei den folgenden Fragen kommt es auf Ihre subjektiven Einschätzungen an, d.h. es gibt keine richtigen oder falschen Antworten. Es interessiert nur Ihre persönliche Meinung. Bitte beantworten Sie alle Fragen zügig und vertrauen Sie dabei Ihrem spontanen Urteil. Wenn dennoch eine Aussage für Sie schwierig einzuschätzen erscheint, versuchen Sie diese bitte trotzdem zu beantworten.

Wir versichern Ihnen, dass Ihre Daten nur die Universität Münster erreichen und dort zudem streng vertraulich behandelt werden. Sie werden ausschließlich zu Forschungszwecken verwendet.

Martina Mönninghoff, Westfälische Wilhelms Universität Münster

Engagement
Im folgenden werden einige Verhaltensweisen in Bezug auf Ihre Arbeit beschrieben. Bitte geben Sie an, in welchem Ausmaß diese Aussagen für Sie zutreffen. Verwenden Sie bitte wieder die folgenden Abstufungen von **1 = trifft gar nicht zu** bis **5 = trifft völlig zu**.

	(Organizational Citizenship Behavior) *Schätzen Sie bitte ein, wie zutreffend die einzelnen Aussagen für Sie sind.*	**Diese Aussage trifft...** gar nicht zu	eher nicht zu	teil-weise zu	eher zu	völlig zu
1	Zusatzaufgaben landen häufig bei mir.	①	②	③	④	⑤
2	Bei Fragen und Problemen mit der Arbeit wenden sich Kollegen meistens an mich.	①	②	③	④	⑤
3	Es ist mir wichtig, mich mit den Kollegen abzusprechen, auch wenn es Zeit kostet.	①	②	③	④	⑤
4	Ich beschäftige mich auch in der Freizeit häufig mit Dingen aus der Arbeit.	①	②	③	④	⑤
5	Auch wenn ich selber dadurch unter Druck gerate, halte ich Termine und Absprachen ein.	①	②	③	④	⑤
6	Ich komme häufig nicht dazu, meine Pausen zu machen.	①	②	③	④	⑤
7	Ich achte darauf, Kollegen Informationen, die ich erhalte, gleich weiter zu geben, auch wenn es für mich aufwendig ist.	①	②	③	④	⑤
8	Es kommt häufig vor, dass ich Sachen hinten anstelle, um einzuspringen, wenn Not am Mann ist.	①	②	③	④	⑤
9	Mir gelingt es immer wieder, andere zu motivieren, wenn sie mal Probleme mit ihrer Arbeit haben.	①	②	③	④	⑤
10	Ich arbeite in der Regel länger als meine Kollegen.	①	②	③	④	⑤

C. Questionnaire for the Assessment of Subordinates' Affective, Normative, and Continuance Organizational Commitment

Fragebogen Mitarbeiter
(Qestionnaire subordinates)

Verbundenheit und Identifikation mit der Organisation
Anhand der folgenden Aussagen möchten wir erfahren, wie sehr Sie sich der **Organisation** verbunden fühlen.

	(Organizational Commitment) *Schätzen Sie bitte ein, wie zutreffend die einzelnen Aussagen für Sie sind.*	Diese Aussage trifft... gar nicht zu	eher nicht zu	teil-weise zu	eher zu	völlig zu
1	Ich wäre sehr froh, mein weiteres Arbeitsleben in dieser Organisation verbringen zu können.	①	②	③	④	⑤
2	Es wäre mit zu vielen Nachteilen für mich verbunden, wenn ich momentan diese Organisation verlassen würde.	①	②	③	④	⑤
3	Ich fühle mich emotional nicht sonderlich mit dieser Organisation verbunden.	①	②	③	④	⑤
4	Ich bin stolz darauf, dieser Organisation anzugehören.	①	②	③	④	⑤
5	Zu vieles in meinem Leben würde sich verändern, wenn ich diese Organisation jetzt verlassen würde.	①	②	③	④	⑤
6	Ich glaube, dass ich momentan zu wenige Chancen habe, um einen Wechsel der Organisation ernsthaft in Erwägung zu ziehen.	①	②	③	④	⑤
7	Ich habe schon zu viel Kraft und Energie in diese Organisation gesteckt, um jetzt noch an einen Wechsel zu denken.	①	②	③	④	⑤
8	Viele Leute, die mir wichtig sind, würden es nicht verstehen oder wären enttäuscht, wenn ich diese Organisation verlassen würde.	①	②	③	④	⑤
9	Selbst wenn es für mich vorteilhaft wäre, fände ich es nicht richtig, diese Organisation zu verlassen.	①	②	③	④	⑤
10	Ich würde mich irgendwie schuldig fühlen, wenn ich diese Organisation jetzt verlassen würde.	①	②	③	④	⑤
11	Ich empfinde ein starkes Gefühl der Zugehörigkeit zu meiner Organisation.	①	②	③	④	⑤
12	Ich denke, dass meine Wertvorstellungen zu denen der Organisation passen.	①	②	③	④	⑤
13	Es macht keinen guten Eindruck, häufiger die Organisation zu wechseln.	①	②	③	④	⑤
14	Ich würde die Organisation jetzt nicht verlassen, weil ich mich einigen Leuten darin verpflichtet fühle.	①	②	③	④	⑤

Vielen Dank für Ihre Teilnahme!

D. Questionnaire for the Assessment of Leaders' Performance Appraisal by Supervisor

Fragebogen Vorgesetzter
(Qestionnaire supervisor)

Vielen Dank, dass Sie sich die Zeit nehmen, den folgenden Fragebogen zu beantworten. Es geht darum, dass Sie die Leistung Ihres Mitarbeiters einschätzen.

Martina Mönninghoff
Westfälische Wilhelms Universität Münster

Das Ausfüllen des Fragebogens wird etwa **10 Minuten** in Anspruch nehmen.

	Die Führungskraft…	Stimme nicht zu				Stimme zu
1.	... tut, was immer auch nötig ist.	①	②	③	④	⑤
2.	... verfolgt Ziele konsequent.	①	②	③	④	⑤
3.	... konfrontiert Mitarbeiter direkt mit auftretenden Problemen.	①	②	③	④	⑤
4.	... zeigt Initiative, auch über primären Arbeitsbereich hinaus.	①	②	③	④	⑤
5.	... fühlt sich der Arbeit verpflichtet.	①	②	③	④	⑤
6.	... bemüht sich, die Arbeit besonders gut zu erledigen.	①	②	③	④	⑤
7.	... ist auch in schwierigen Situationen sehr motiviert.	①	②	③	④	⑤
8.	... baut bei der Arbeit neue Beziehungen auf und verbessert bestehende.	①	②	③	④	⑤
9.	... hat gut funktionierende zwischenmenschliche Beziehungen.	①	②	③	④	⑤
10.	... ist sensibel gegenüber anderen.	①	②	③	④	⑤
11.	... arbeitet gut mit den Arbeitskollegen zusammen.	①	②	③	④	⑤
12.	... nimmt auf die Arbeitskollegen Rücksicht.	①	②	③	④	⑤
13.	... geht mit dem Budget vorausschauend und effektiv um.	①	②	③	④	⑤
14.	... erhöht durch die Arbeit den Umsatz des Unternehmens.	①	②	③	④	⑤
15.	... hat eine schnelle Auffassungsgabe.	①	②	③	④	⑤
16.	... ist bei neuen Aufgaben flexibel.	①	②	③	④	⑤

Fragebogen Vorgesetzter
(Qestionnaire supervisor)

	Die Führungskraft …	Stimme nicht zu				Stimme zu
17.	... fällt es leicht, strategische Entscheidungen zu fällen.	①	②	③	④	⑤
18.	... ist ein guter Planer.	①	②	③	④	⑤
19.	... zeigt eine hohe Qualität bei der Arbeitsleistung.	①	②	③	④	⑤
20.	... erledigt eigene Aufgaben gut.	①	②	③	④	⑤
21.	... hat gute administrative Fähigkeiten.	①	②	③	④	⑤
22.	... besitzt ein hohes fachliches Know-how.	①	②	③	④	⑤
23.	... hat eine große Planungsinitiative.	①	②	③	④	⑤
24.	... kann gut verhandeln.	①	②	③	④	⑤
25.	... kann Probleme gut lösen.	①	②	③	④	⑤
26.	... leitet ein produktives Team.	①	②	③	④	⑤
27.	... nutzt die das zur Verfügung stehenden Ressourcen optimal.	①	②	③	④	⑤
28.	... kann eigene Mitarbeiter gut führen.	①	②	③	④	⑤
29.	... schafft ein entwicklungsförderndes Klima.	①	②	③	④	⑤
30.	... ist dynamisch.	①	②	③	④	⑤
31.	... arbeitet teamorientiert.	①	②	③	④	⑤
32.	... betreut eigene Mitarbeiter gut.	①	②	③	④	⑤
33.	... gibt den Mitarbeitern häufig Rückmeldungen (positive und negative).	①	②	③	④	⑤
34.	... gibt eine klare Richtung vor, in die es bei der Arbeit gehen soll.	①	②	③	④	⑤
35.	... motiviert die eigenen Mitarbeiter.	①	②	③	④	⑤
36.	... achtet auf zwischenmenschliche Beziehungen.	①	②	③	④	⑤
37.	... hat Power.	①	②	③	④	⑤

E. Self-Monitoring Scale

Fragebogen Teilnehmer
(Qestionnaire participant)

Lieber Teilnehmer,
dieser Fragebogen erhebt einige Eigenschaften Ihrer Persönlichkeit. Bei den folgenden Fragen kommt es auf Ihre subjektiven Einschätzungen an, d.h. es gibt keine richtigen oder falschen Antworten. Es interessiert nur Ihre persönliche Meinung. Bitte beantworten Sie alle Fragen zügig und vertrauen Sie dabei Ihrem spontanen Urteil. Wenn dennoch eine Aussage für Sie schwierig einzuschätzen erscheint, versuchen Sie diese bitte trotzdem zu beantworten. Wir versichern Ihnen, dass Ihre Daten nur die Universität Münster erreichen und dort zudem streng vertraulich behandelt werden. Sie werden ausschließlich zu Forschungszwecken verwendet.

Martina Mönninghoff, Westfälische Wilhelms Universität Münster

Self-monitoring (Sensitivity)		Immer richtig	Meist richtig	Manchmal richtig	Manchmal falsch	Meist falsch	Immer falsch
1.	Ich bin häufig in der Lage, die wahren Gefühle anderer Personen in deren Augen zu erkennen.	○	○	○	○	○	○
2.	In Gesprächen bin ich für die kleinste Veränderung im Mienenspiel meines Gegenübers sensibel.	○	○	○	○	○	○
3.	Meine Intuition ist ziemlich gut, wenn es um das Verständnis der Gefühle und Motive anderer geht.	○	○	○	○	○	○
4.	Ich merke gewöhnlich, wenn andere einen Witz schlecht finden, selbst wenn sie überzeugend lachen.	○	○	○	○	○	○
5.	Ich merke gewöhnlich an den Augen meines Zuhörers, wenn ich etwas Unangemessenes gesagt habe.	○	○	○	○	○	○
6.	Wenn mich jemand anlügt, merke ich das gewöhnlich sofort an der Art seines Ausdrucks.	○	○	○	○	○	○
7.	In sozialen Situationen habe ich die Fähigkeit, mein Verhalten zu verändern, wenn ich fühle, dass etwas anderes erwartet wird.	○	○	○	○	○	○

Self-monitoring (Self-Presentation)		Immer richtig	Meist richtig	Manchmal richtig	Manchmal falsch	Meist falsch	Immer falsch
8.	In Abhängigkeit davon, welchen Eindruck ich erwecken möchte, bin ich fähig, die Art und Weise, wie ich Menschen gegenübertrete, zu kontrollieren.	○	○	○	○	○	○
9.	Wenn ich das Gefühl habe, dass das Bild, das ich vermittle, nicht wirkt, kann ich es so ändern, dass es wirkt.	○	○	○	○	○	○
10.	Ich habe Schwierigkeiten, mein Verhalten an verschiedene Menschen bzw. an verschiedene Situationen anzupassen.	○	○	○	○	○	○
12.	Ich habe festgestellt, dass ich mein Verhalten an die Erfordernisse jeder Situation, in der ich mich befinde, anpassen kann.	○	○	○	○	○	○
13.	Selbst wenn es zu meinem Vorteil sein könnte, habe ich Schwierigkeiten, eine gute Miene zu machen.	○	○	○	○	○	○
14.	Wenn ich einmal weiß, was die Situation erfordert, ist es leicht für mich, meine Handlungen entsprechend auszurichten.	○	○	○	○	○	○

F. Wong and Law Emotional Intelligence Scale

Fragebogen Teilnehmer
(Qestionnaire participant)

	Emotional Intelligence	Stimme zu						Stimme nicht zu
1.	Meistens habe ich einen guten Sinn dafür, warum ich bestimmte Gefühle empfinde.	O	O	O	O	O	O	O
2.	Ich habe ein gutes Verständnis von meinen eigenen Gefühlen	O	O	O	O	O	O	O
3.	Ich kann meine eigenen Gefühle gut einschätzen.	O	O	O	O	O	O	O
4.	Ich verstehe wirklich, was ich fühle.	O	O	O	O	O	O	O
5.	Ich weiß immer, ob ich gerade glücklich bin oder nicht.	O	O	O	O	O	O	O
6.	Ich (er-)kenne die Gefühle meiner Freunde anhand ihres Verhaltens.	O	O	O	O	O	O	O
7.	Ich bin ein guter Beobachter für die Gefühle anderer.	O	O	O	O	O	O	O
8.	Ich bin sensibel für die Gefühlen und Empfindungen anderer.	O	O	O	O	O	O	O
		Stimme zu						Stimme nicht zu
9.	Ich habe ein gutes Verständnis von den Gefühlen der Leute in meiner Umgebung.	O	O	O	O	O	O	O
10.	Ich kann die Gefühle der Menschen in meiner Umgebung gut einschätzen.	O	O	O	O	O	O	O
11.	Ich setzte mir immer Ziele und versuche dann mein Bestes, um diese zu erreichen.	O	O	O	O	O	O	O
12.	Ich sage mir immer selbst, dass ich eine fähige Person bin.	O	O	O	O	O	O	O
13.	Ich bin eine selbstmotivierte Person.	O	O	O	O	O	O	O
14.	Ich motiviere mich oft selbst, um meine Ziele zu erreichen.	O	O	O	O	O	O	O
15.	Ich würde mich immer selbst dazu ermutigen, mein Bestes zu geben.	O	O	O	O	O	O	O
		Stimme zu						Stimme nicht zu
16.	Ich ermutige mich immer selbst dazu, mein Bestes zu geben.	O	O	O	O	O	O	O
17.	Ich kann mein Temperament kontrollieren und mit Schwierigkeiten rational umgehen.	O	O	O	O	O	O	O
18.	Ich kann meine eigenen Gefühle ganz gut kontrollieren.	O	O	O	O	O	O	O
19.	Ich kann mich immer schnell wieder beruhigen, wenn ich sehr ärgerlich bin.	O	O	O	O	O	O	O
20.	Ich habe meine eigenen Gefühle gut unter Kontrolle.	O	O	O	O	O	O	O

G. Despriptives of Moderators for Both Samples Separately

Table 35: Descriptives of Moderators for Both Samples Separately

	Study I				Study II			
Group	Intervention		Control		Intervention		Control	
	M	*SD*	M	*SD*	M	*SD*	M	*SD*
SEN	3.30	*0.28*	3.30	*2.29*	3.19	*0.25*	3.16	*0.22*
SP	2.98	*0.57*	2.97	*0.54*	3.05	*0.26*	3.00	*0.36*
OEA	2.47	*0.91*	2.56	*1.02*	2.36	*0.61*	2.18	*0.62*
UOE	2.28	*1.19*	2.21	*1.13*	2.24	*0.61*	2.09	*0.64*

Note: SEN (sensitivity) and SP (self-presentation) belong to the variable self-monitoring, whereas OEA (others' emotional appraisal) and UOE (use of emotion) belong to emotional intelligence.

H. Additional Utility Analyses of Study I

With regard to transformational leadership, there are high costs of 9 750 € after three months and a return on investment of 46 200 € after six months (see table 36). After 12 months the return on investment is almost reduplicated although costs of training increased and less participants (N = 15) contributed to the return on investment.

Table 36: Utility Analysis on Basis of Effect Sizes of Transformational Leadership of Study I

	After 3 months	After 6 months	After 9 months	After 12 months
N	25	21	19	15
C	570	1 040	1 510	1 980
SD_y	12 000	12 000	12 000	12 000
T	0.25	0.50	0.75	1
d	0.06	0.54	0.37	0.62
Utility in €	**-9 750**	**46 200**	**34 580**	**81 900**

Note: N (number of participants), C (costs of intervention in Euro per participant), SD_y (standard deviation (40% of) of estimated annual salary in Euro), T (time after first intervention in years), d (effect size with regard to transformational leadership perceived by all perspectives), Utility (calculated utility of intervention in Euro, see formular 2.2)

Finally, table 37 presents the calculation of the utility analysis on the basis of effect sizes resulting from followers' OCB. As effects were measured in followers' OCB, utility was calculated with the number of followers (N_{fol}) whereas costs were calculated with the number of participating leaders (N_{lea}). It was assumed that each leader affects approximatly five followers. Thus, N_{fol} was calculated as 5 x N_{lea}. Furthermore, is then extimated as the standard deviation (40%) of extimated annual salary of followers (chemical worker 25 000€). This leads to the following adjustments of formula 2.2

$$\Delta U = T\, N_{fol}\, d_t\, SD_y - N_{lea}\, C \qquad (2.3)$$

resulting in high return on investments already after three months (98 250 €) under the assumtion that OCB has an influence on productivity.

Table 37: Utility Analysis on Basis of Effect Sizes of Followers' OCB of Study I

	After 3 months	After 6 months
N_{lea}	25	21
C	570	1 040
SD_y	10 000	10 000
T	0.25	0.50
N_{fol}	125	105
d	0.36	0.29
Utility in €	**98 250**	**130 410**

Note: N_{lea} (number of participants), N_{fol} (number of follwers), C (costs of intervention in Euro per participant), SD_y (standard deviation (40%) of estimated annual salary of followers in Euro), T (time after first intervention in years), d (mean effect size with regard to followers' OCB), Utility (calculated utility of intervention in Euro, see formular 2.3)

I. Additional Utility Analysis of Study II

With regard to effect sizes for transformational leadership, there is a return on investment of 93 198 € already after three months. As in Study I, utility analysis estimates illustrate a steadily increase of return on investment although costs of training intervention increase and effect sizes slightly decrease (see table 38).

Table 38: Utility Analysis on Basis of Effect Sizes of Transformational Leadership of Study II

	After 3 months	After 6 months	After 9 months
N	21	21	13
C	574	948	1 422
SD_p	11 200	11 200	11 200
T	0.25	0.50	0.75
d	1.79	1.2	1.27
Utility	**93 198 €**	**121 212 €**	**120 198 €**

Note: N (number of participants), C (costs of intervention in Euro per participant), SD_y (standard deviation (40% of) of estimated annual salary in Euro), T (time after first intervention in years), d (effect size with regard to transformational leadership perceived by all perspectives), Utility (calculated utility of intervention in Euro, see formular 2.2)

Deutsche Zusammenfassung

Führung ist eines der ältesten Phänomene der Welt. Dieses Phänomen zeigt sich, wo auch immer Menschen aufeinander treffen – unabhängig von deren Kultur, Bildung oder Alter. In Unternehmen spielt die Führung oft eine ausschlaggebende Rolle als einer der wichtigsten Treiber für den Erfolg einer Firma (Bass, 1990b). Führung kann bis zu 45 Prozent der Unternehmensleistung ausmachen (Day & Lord, 1988). Aus diesem Grund sind nicht nur Wissenschaftler, sondern auch Manager sehr an der stetigen Verbesserung der Mitarbeiterführung interessiert.

Trotz dieses Interesses finden sich bis heute relativ wenig summative Evaluationen von Führungskräfte-Entwicklungsprogrammen. Obwohl Führungskräftetrainings für Unternehmen immer die Investition von unproduktiven Personalstunden und von hohen Unkosten bedeutet, werden ihre Wirksamkeit in der Praxis, und damit ihr Nutzen für das Unternehmen, selten überprüft. Dies mag daran liegen, dass die notwendigen Längsschnittstudien nicht nur komplex sondern auch zeitaufwendig sind. So finden sich bis heute zwar mehrere hundert wissenschaftlichen Querschnittsstudien zum Thema der transformationale Führung, jedoch gibt es äußerst wenige Längsschnittstudien, die die Wirksamkeit von Trainings für transformationale Führung evaluieren.

Das Konzept der transformationalen Führung nimmt seit über zwei Jahrzehnten einen besonderen Platz in der Führungsforschung ein. Dieses Konzept hat die Führungsforschung in den achziger Jahren neu belebt und zeigt sich bis heute in interkulturellen Studien als das Führungskonzept, dass von Managern aus über 60 Kulturen als am effektivsten bewertet wird (Brodbeck & Frese, 2007). Transformationale und transaktionale Führung gehören zur sogenannten Full Range of Leadership Theory (Bass & Avolio, 1994). Während die transformationale – oder charismatische – Führung durch intellektuelle Anregung zu neuen Ideen, durch individuelle Berücksichtigung und durch Begeisterung für gemeinsame Visionen die Mitarbeiter zu Höchstleistungen motiviert, so erzielt die transaktionale Führung Ergebnisse, indem die Führungskraft mit dem Mitarbeiter klar Ziele vereinbart und das Erreichen dieser Ziele belohnt. Zahlreiche Studien stützen die Hypothese, dass transformationale Führung effektiver ist als transaktionale Führung (Bass & Avolio, 1990b; Bycio, Hackett & Allen, 1995; Hater & Bass, 1988; Howell & Avolio, 1993; Kirkpatrick & Locke, 1996). Darüber hinaus zeigen Forschungsstudien, dass die

transformationale Führung hoch mit z.B. der Mitarbeiterzufriedenheit, Mitarbeitereffektivität und Effektivität der Führungskraft korreliert (e.g. DeGroot, Kiker & Cross, 2000; Dumdum, Lowe & Avolio, 2002). Seltener jedoch wurde untersucht, ob es möglich ist, transformationales Führungsverhalten durch Trainings oder Coaching zu verbessern. Die vorliegende Studie bietet somit eine der wenigen und längst überfälligen Längstschnittuntersuchungen, die die Effektivität eines Trainingsprogramms zur Verbesserung der Transformationalen Führung überprüft.

In zwei Studien (N = 32 und N = 41) wurde ein Führungskräfteentwicklungsprogramm evaluiert, das Manager in Verhaltensweisen der transformationalen Führung trainiert. Das Trainingsprogramm besteht zunächst aus einem zweitägigen Gruppenworkshop, der die Teilnehmer in das Konzept der transformationalen Führung einführt. Desweiteren folgen in Intervallen von drei Monaten bis zu vier zweitägige Follow-up Seminare, die die Methoden Kollegiales Team Coaching und 360°-Feedback beinhalten. Um die Wirkung des Trainingsprogramms auf die Wahrnehmung des Führungsverhaltens, auf das Organisationale Commitment und das Organzational Citizenship Behavior (Engagement) der Mitarbeiter und schließlich auf die Leistungsbeurteilung durch den Vorgesetzten zu bewerten, wurde ein Pretest-Posttest Kontrollgruppen Design angewendet. Darüber hinaus wurde ein non-equivalent dependent variable design (Cook & Campbell, 1979) verwandt, das das trainierte Kriterium (transformationale Führung) mit dem untrainierten Kriterium (transaktionale Führung) vergleicht. Zusätzlich wurde der Einfluss von zwei Teilnehmerdispositionen – Self-Monitoring und Emotionale Intelligenz – auf die Effektivität des Trainingsprogramms untersucht.

Varianzanalysen zeigen, dass das Trainingsprogramm zu signifikanten positiven Effekten auf die Wahrnehmung der transformationalen Führung und auf die Leistungsbeurteilung durch Vorgesetzte führt. Zusätzlich unterstreichen gute bis exzellente Effektstärken bezüglich der transformationalen Führung, des Organizational Citizenship Behavior der Mitarbeiter und der Leistungsbeurteilung durch den Vorgesetzten die Effektivität des Trainingsprogramms. Während trainierte Manager sich in dem trainierten Verhalten der transformationalen Führung verbesserten, verbesserten sie sich nicht in den nicht trainierten Verhaltensweisen der transaktionalen Führung. Berechnungen von psychologischen Kosten-Nutzen-Analysen schätzen

positive Renditen durch die Investition in das Training. Ergebnisse der überprüften Moderatoren Self-Monitoring und Emotionale Intelligenz waren inkonsistent.

Die Ergebnisse der zwei vorliegenden Studien weisen darauf hin, dass transformationale Führung in Deutschland tatsächlich durch ein Führungskräfte-Entwicklungsprogramm verbessert werden kann. Das Entwicklungsprogramm zeigt darüber hinaus auch positive Effekte auf die Vorgesetztenbeurteilung der Führungsleistung und teilweise auch auf das Organizational Citizenship Behavior der Mitarbeiter. Diese Befunde sprechen für die Effektivität des untersuchten Führungskräfteentwicklungsprogramms zur Verbesserung der Transformationalen Führung.