2. Theoretical background

"The interests of the organization and its members need to be aligned. Such is a task for the transformational leader" (Bass, 1999b, p. 9).

With the aim of being able to explain the effectiveness of a leader in times of rapid organizational or environmental change, the concept of transformational leadership was drawn upon. Therefore, much of the leadership research conducted in the last 25 years dealt with this leadership concept. In order to better understand the research situation that this concept was 'born' into, the next chapter will firstly try to define leadership and then shortly describe some earlier leadership theories, whereby the focus will be upon theories that are, in my opinion, somehow related to transformational leadership. After this short introduction into the history of leadership research, transformational leadership and the most prominent questionnaire that assesses this behavior, the Multifactor Leadership, will be discussed.

2.1 Leadership

> The concept of leadership has an ambiguous status in organizational practice, as it does in organizational theory. In practice, management appears to be of two minds about the exercise of leadership. Many jobs are so specified in content and method that within very broad limits differences among individuals become irrelevant, and acts of leadership are regarded as gratuitous at best, and at worst insubordinate. (Katz & Kahn, 1966, p. 300)

2.1.1. Leadership definitions

"The term leadership is a word taken from the common vocabulary and incorporated into the technical vocabulary of a scientific discipline without being precisely redefined" (Yukl, 2002, p. 2). There exist numerous definitions of leadership, almost as

many as there are scientists who work on the concept of leadership (Stogdill, 1974), trying to narrow this concept down in terms of traits, behaviors, influence, interaction patterns, role relationships, occupation of an administrative position, or attributions. Still, the observation made by Bennis (1959) holds as it did many years ago:

> Always, it seems, the concept of leadership eludes us or turns up in another form to taunt us again with its slipperiness and complexity. So we have invented an endless proliferation of terms to deal with it … and still the concept is not sufficiently defined. (p. 159)

Besides, leadership ideologies and myths (for more details see Neuberger, 2002) further blur the common understanding of leadership.

Yukl (2002) presents a compilation of representative definitions of leadership from 1957 up to 1999 (see Table 01). Taking these definitions, it becomes clear that most of the leadership definitions assume that "leadership is a process whereby intentional influence is exerted by one person over others in order to guide, structure and facilitate organizational activities and relationships" (Yukl, 2002, p. 7). As this might be the lowest common denominator of leadership definitions, it is also chosen as the basic definition of leadership for this paper. However, the focus on leadership differs as to who exerts influence and in what manner, as well as the purpose and the outcome of the influence attempt. Hence, when leadership is defined in different ways, the research focus, as well as the interpretation of results, shifts.

Table 01. Definitions of leadership (Yukl, 2002, p. 3)

	Leadership is …
1.	"the behavior of an individual … directing the activities of a group toward a shared goal" (Hemphill & Coons, 1957, p. 7)
2.	"the influential increment over and above mechanical compliance with the routine directives of the organization" (Katz & Kahn, 1978, p. 528)

Table 01 continued

	Leadership is …
3.	"exercised when persons … mobilize … institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers" (Burns, 1978, p. 18)
4.	"the process of influencing the activities of an organized group toward goal achievement" (Rauch & Behling, 1984, p. 46)
5.	"a process of giving purpose (meaningful direction) to collective effort, and causing willing effort to be expended to achieve purpose" (Jacobs & Jaques, 1990, p. 281)
6.	"the ability to step outside the culture … to start evolutionary change processes that are more adaptive" (Schein, 1992, p. 2)
7.	"the process of making sense of what people are doing together so that people will understand and be committed" (Drath & Palus, 1994, p. 204)
8.	"about articulating visions embodying values, and creating the environment within which things can be accomplished" (Richards & Engle, 1986, p. 206)
9.	"the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organization…" (House et al., 1999, p. 184)

2.1.2. Leadership theories

All through the research period dealing with leadership, the focus has changed quite a lot. However, certain tendencies can be identified. Bryman (1992) roughly splits leadership research into four decades, beginning with the trait approach up to the 1940s and ending to date with the so-called new leadership approach that includes charismatic and transformational leadership (see Table 02).

This brief listing is, of course, not exhaustive but rather superficial. Motivational approaches, attribution theory, learning theories etc., which also play an important part in understanding leadership, are missing.

Table 02. Trends in leadership theory and research (Bryman, 1992, p.1)

Period	Approach	Core theme
Up to late 1940s	Trait approach	Leadership ability is innate
Late 1940s to late 1960s	Style approach	Leadership effectiveness is to do with how the leader behaves
Late 1960s to early 1980s	Contingency approach	It all depends; effective leadership is affected by the situation
Since early 1980s	New Leadership approach (includes transformational and charismatic leadership)	Leaders need vision

Although research trends have changed over the years, each new stage did not herald the demise of its predecessor; rather, a change in emphasis and perspective was indicated. Components of the preceding approaches can be found in the following trends. The new leadership approach, for example, refers to charisma and leadership behaviors and therefore combines the first two decades with newer theoretical suppositions.

The attempts to organize the major approaches to leadership according to the literature have only been partially successful (Yukl, 2002). A more useful way is the classification according to the type of variable that is emphasized the most. The three major variables of leader research are (1) characteristics of the leader (traits, skills, behavior, influence tactics, attributions about followers, etc.), (2) characteristics of the followers (traits, skills, attributions about the leader, trust in the leader, task commitment, satisfaction, etc.), and (3) characteristics of the situation (type or size of organizational unit, position power, task structure, environmental uncertainty, external dependencies, etc.).

According to Yukl (2002), in order to explain effective leadership, leadership theories emphasize one category more than the others. Therefore, he classifies the theories and empirical approaches into the following five categories (see Table 03).

Table 03. Leadership approaches according to Yukl (2002)

Approach	Examples
Trait Approach	Trait theory
Behavior Approach	Ohio, Michigan studies
Power-Influence Approach	Participative leadership
Situational Approach	Contingency theories, leadership substitutes
Integrative Approach	Charismatic leadership, transformational leadership

Another way of classifying leadership theories is to expand the major variables and thereby to also regard their mode of action (see Fig. 01).

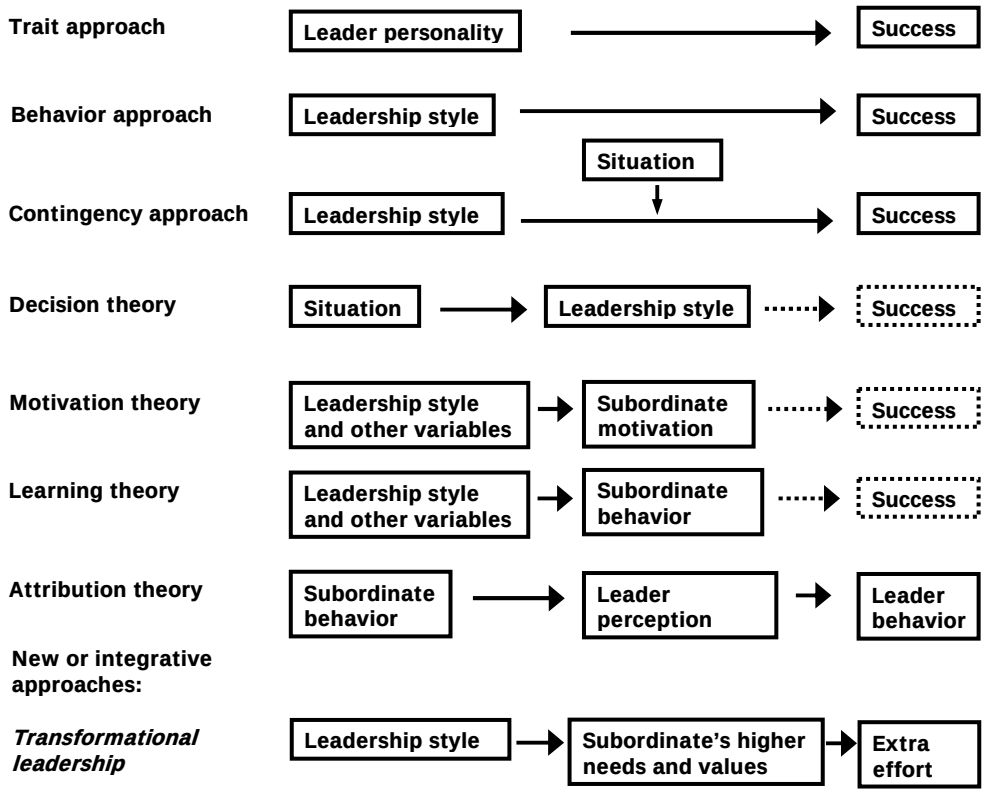

Figure 01. Approaches to leadership (solid lines mark a direct influence; dotted lines mark expected influences; however, these are not part of the resp. theory)

In this line-up of leadership approaches, transformational leadership has an outstanding position. As mentioned above, it can be included in the categories of new leadership or integrative leadership. Therefore, it is not a leadership category on its own. It is still included in this overview because of two reasons: first, it is harder to find a common formula for all the new or integrative leadership approaches that can be easily transferred into a small figure and second, as the major focus of this paper is on transformational leadership it was chosen as the representative of these approaches.

The above mentioned definitions of leadership and the categorizations build the frame for the following brief description of different leadership approaches.

2.1.3. Trait approach

The trait approach is one of the earliest approaches to studying leadership. Evolving from the 'great man' theories that "asserted that leadership qualities were inherited, especially by people from the upper class. Great man were born, not made (in those days, virtually all business leaders were men)" (Kirkpatrick & Locke, 1991, p. 48).

Trait theories emphasize the personal qualities of leaders and focus attributes that distinguish leaders from non-leaders. Three kinds of traits were mostly studied in this early leadership research: physical factors (height, appearance, age, etc.), aspects of personality (self-esteem, dominance, emotional stability, conservatism, etc.), and aptitudes (general intelligence, fluency of speech, creativity, etc), assuming that the differential traits could be identified by empirical research. Stogdill's (1948) review on the literature on leadership traits showed associations with factors that he classified under the general headings of capacity (intelligence, alertness, verbal facility, originality, judgment), achievement (scholarship, knowledge, athletic accomplishments), responsibility (dependability, initiative, persistence, aggressiveness, self confidence, desire to excel), participation (activity, sociability, cooperation, adaptability, humor), and status (socio-economic position, popularity). However, the basic premise of the trait approach – that a person must possess a particular set of traits in order to be identified as a leader – could not be supported. "A person does not become a leader by virtue of the possession of some combination of traits, but the pattern of personal characteristics of the leader must bear some relevant relationship to the characteristics, activities, and goals of followers" (Stogdill, 1948, p. 64). Therefore

Stogdill (1948) takes another significant factor into consideration: the situation (mental level, status, skills, needs and interests of followers, objectives to be achieved, etc.).

In his second review, Stogdill (1974) concludes:

> The leader is characterized by a strong drive for responsibility and task completion, vigor and persistence in pursuit of goals, venturesomeness and originality in problem solving, drive to exercise initiative in social situations, self-confidence and sense of personal identity, willingness to accept consequences of decision and action, readiness to absorb interpersonal stress, willingness to tolerate frustration and delay, ability to influence other persons' behavior, and capacity to structure social interaction systems to the purpose at hand. It can be concluded that the clusters of characteristics listed above differentiate (1) leaders from followers, (2) effective from ineffective leaders, and (3) higher echelon from lower echelon leaders. (p. 81)

Although the relations in the second review were stronger, indicating that the possession of some traits increases the likelihood that a leader will be effective, Stogdill made clear that there was still no evidence of universal leadership traits.

A recent meta-analysis shows that intelligence, dominance and masculinity-femininity are significantly associated with leadership perceptions (Lord, De Vader, & Alliger, 1986) and this "to a higher degree and more consistently than the popular literature indicates" (p. 407). The authors still point out that particular prototypical traits may not be present, but a person could still be perceived as a leader if he or she possessed other prototypical traits. Furthermore, their findings "do not *directly* imply that there are also traits that would generally predict the performance of a leader's work group or organization, nor do they imply that there are certain types of leadership behaviors that will generally produce superior performance" (Lord et al., 1986, p. 408).

Based on the above mentioned report by Stogdill (1948), and another report by Mann (1959), who both could not find traits that consistently differentiated leaders from non-leaders across a variety of situations, trait theories have not been seriously considered since (Kirkpatrick & Locke, 1991), even though they were misinterpreted. However, the

late revival of charismatic theories and implicit leadership theories also revives the impact of leader traits. Lord et al. (Lord et al., 1986) state that "consistent with the social-cognitive perspective, research on ILTs [implicit leadership theories] shows that cognitive schema composed primarily of traits are important perceptual constructs that should predict leadership perceptions or leadership emergence" (p. 403). Furthermore, leader traits resp. their systematic convertibility play a crucial role in the more applied area of leadership trainings.

2.1.4. Behavior Approach

From the late 1940s onwards, the focus of leadership research shifted from leader traits to leader behavior. Researchers were particularly interested in identifying leader behaviors that enhanced the effectiveness of subordinates. With that shift in research, the former common opinion that leaders with the right qualities have to be selected changed into the opinion that, knowing the effective leadership behaviors, leaders can be trained to become successful (Bryman, 1992). Mainly two research groups coined the behavior approach – the Ohio and the Michigan studies.

The term 'style approach' is sometimes used interchangeably with the term 'behavior approach' (Bryman, 1992). However, leadership behavior is an empirically observable influence attempt that varies according to the situation, whereas a leadership style denotes a long-term, situational invariant behavioral pattern (Staehle, 1999). From the point of view of the subordinate, leadership is experienced as a 'style'. Ideal types of leadership styles are, however, only heuristics for the generation of hypotheses.

According to Staehle (Staehle, 1999), normally four types of leadership styles can be distinguished:

- the patriarchal style (characterized by the picture of the patriarch and his unquestioned acknowledgement by the family members. The patriarch is obliged to be allegiant and provident concerning his subordinates, but expects loyalty, thankfulness and obedience in exchange);
- the charismatic style (characterized by a leader who constitutes his claim of regnancy on special, unique personality traits and therefore knows no predecessor and successor or substitute. He is most effective in crises where the

belief that a leader comes to the rescue has suppressed rational problem-solving strategies);

- the autocratic style (is characterized by a leader in large organizations who uses the hierarchical structures for the exertion of power. Subordinated instances are used to assert the decisions of the autocrat, therefore personal contact between the autocrat and the staff is minimal);
- the bureaucratic style (characterized by an extreme version of structuring and regimentation of organizational behavior. The professional competence of the bureaucrat, which is accepted as the legitimization of the bureaucrat's power, replaces the arbitrariness of the autocrat).

Other contributions to taxonomies of leadership styles were made by Lattmann (1975) who distinguishes six leadership styles (from the despotic style to self-management) that can be subsumed in leadership styles with an authoritarian and those with a democratic tenor. Furthermore, Tannenbaum and Schmidt (1958) arranged six leadership styles (from authoritarian to delegating) according to the proportion of the scope for decision-making of the leader to the scope of decision-making of the group.

Turning away from the mere presentation of ideal leadership styles, the Ohio and Michigan studies tried to observe leadership behaviors. In the Michigan studies, the center of interest lay upon analyzing efficient leadership behavior, the efficiency criteria being productivity, satisfaction, fluctuation, absenteeism, costs, rejections, and motivation (Staehle, 1999). Two leadership behaviors were identified as correlating with certain efficiency criteria: employee orientation and production orientation.

> The employee-oriented supervisor, in contrast to the production-oriented … supervisor, gives major attention to creating employee motivation. The specific ways in which he does this may vary from situation to situation, but they contribute to a supportive personal relationship between himself and his work group members (Kahn & Katz, 1960, p.562).

The production-oriented style emphasizes the technical and performance aspects of the tasks. The subordinate is mostly seen as a means for realizing the organizational goals (Staehle, 1999). Those two leadership behaviors were seen as the two ends of a

continuum, so that the more employee-oriented, the less production-oriented the leader was. A core expectation of the Michigan studies was that the employee-oriented leadership behavior did not only lead to higher satisfaction of the subordinates, but also to higher productivity. However, empirical results do not support this 'one-best-way' hypothesis. In the continuation of these early Michigan results, Bowers and Seashore (1966) develop a four-factor leadership model. However, the results show that the four factors (support, interaction facilitation, goal emphasis, and work facilitation) cannot exclusively explain the effectiveness of an organization.

The Ohio Studies - Initiating Structure and Consideration

In order to measure a range of leadership behaviors instead of the former researched leader traits, the researchers of the Ohio research board agreed on ten leader behavior categories (initiation, representation, fraternization, organization, domination, recognition, production emphasis, integration, communication up and communication down; Fleishman, 1973) that provided a framework for the collection of items. From the initial 1790 items, 150 items remained after the sorting process was completed and composed the preliminary Leadership Behavior Description Questionnaire (LBDQ, Hemphill & Coons, 1957). The reliability scores of the scales were all satisfactory; however, the correlations of the scales "tend to reinforce the anticipation that the leader behavior dimensions were not independent. Most of the dimensions show substantial overlap with one another" (Hemphill & Coons, 1957, p. 23). A factor analysis revealed three factors: maintenance of membership character (being a good fellow to one's subordinates, behavior socially agreeable to group members), objective attainment behavior (behavior related to the output of the group) and group interaction facilitation behavior (enabling group members to recognize their functions in the group).

"The definitive study which identified consideration and structure was the Air Force project in which the questionnaires were administered to Air Force crews who described their aircraft commander" (Fleishman, 1973, p.7). The number of items in this form was reduced to 130 due to the inappropriateness of some of the items when applied to the air crew situation. With these 130 items eight leadership characteristics were measured: membership, communication, organization, production, domination, leadership quality, goal direction, and initiative (Halpin & Winer, 1957), whereby the leadership quality

dimension was made up of items that had high loadings on several different dimensions in the study of Hemphill and Coons (1957). A factor analysis revealed four factors: Consideration, initiating structure, production emphasis, and sensitivity (social awareness). The first two factors, however, accounted for 83.2% of the variance so that the other two factors could be neglected. The name assigned to the factors was determined by examination of the items with the highest factor loadings.

Initiating Structure

Halpin and Winer (Halpin & Winer, 1957) describe initiating structure in the initial Air Force study as follows:

> The behaviors with high positive loadings on this factor are those which indicate that the aircraft commander, to a marked degree, organizes and defines the relationship between himself and the members of his crew. He tends to define the role which he expects each member of the crew to assume, and endeavors to establish well-defined patterns of organization, channels of communication, and ways of getting jobs done. This factor probably represents a basic and unique function of leadership. It is possible that other factors (including Consideration) may represent only facilitating means for accomplishing this end. (pp. 42/43)

Therefore, "initiating structure denotes the degree to which leaders organize work tightly, structure the work context, provide clear-cut definitions of role responsibility and generally play a very active part in getting the work at hand fully scheduled" (Bryman, 1992, p. 5).

Consideration

For consideration, Halpin and Winer (Halpin & Winer, 1957) propose the following definition:

> High positive loadings on this factor are associated with behavior indicative of friendship, mutual trust, respect, and warmth in the relationship between the aircraft commander and his crew. High negative loadings appear on items of behavior which indicate that the airplane commander is authoritarian and impersonal in his relations with the members of his crew. Tentatively, this factor has been designated as Consideration. It appears to mean the extent to which the aircraft commander, while carrying out his leadership functions, is considerate of the men on the crew. It does not imply laxity in the performance of his duties. (p. 42)

In other words, "consideration relates to the extent to which leaders promote camaraderie, mutual trust, liking and respect in the relationship between themselves and their subordinates" (Bryman, 1992, p. 5).

This two-dimensional leadership concept has had a great impact in the field of leadership and "until the advent of transformational leadership theory beginning in the late 1970s (Bass, 1985; Burns, 1978; House, 1977), these two dimensions dominated leadership research" (Judge, Piccolo, & Ilies, 2004, p. 36). Since then, research interests have shifted to, amongst others, transformational or charismatic leadership theories. "Despite their predominance in the literature a generation ago, Consideration and Initiating Structure have long been dismissed as important influences on leadership effectiveness….These behaviors seem to be in danger of being viewed as historical artifacts of little contemporary relevance" (Judge et al., 2004, pp. 43/44).

In addition to the LBDQ, three more instruments are widely used to measure consideration and initiating structure: the LBDQ Form XII (Stogdill, 1963; measures additional leadership behaviors as well), the Supervisory Behavior Description Questionnaire (SBDQ; Fleishman, 1957a), and the Leadership Opinion Questionnaire (LOQ, measures leadership attitudes; Fleishman, 1957b). However, the comparison of

these questionnaires is restricted as they contain different items and therefore may not examine the same basic behaviors (Schriesheim & Kerr, 1974).

As a result of the high research interest in consideration and initiating structure and the long dominance of this two-dimensional construct in the field of leadership, a lot of studies have been conducted in order to specify the correlations with several outcomes and examine the assumption of orthogonality. A common interpretation of the obtained results is that consideration correlates more strongly with follower satisfaction, whereas initiating structure correlates more strongly with the productivity of effectiveness measures. This is in support of Halpin's (1957) notion that leaders high on initiating structure should be more effective at meeting role expectations, whereas considerate leaders are preferred by the subordinates (hence, they should be more satisfied with them). The orthogonality of the two factors has been the subject of much debate. After a review of the literature, Weissenberg and Kavanagh (1972) concluded that consideration and initiating structure "are not always empirically independent as stated and implied" (p. 127) and were supported by Bass (Bass, 1990a), who noted that "Initiation and Consideration should be independent, but such is not the case" (p. 515).

Judge et al. (2004) conducted a meta-analysis of 130 studies (457 independent samples) in order to investigate these questions. Their results indicate "that both Consideration and Initiating Structure have important main effects on numerous criteria that most would argue are fundamental indicators of effective leadership" (p. 44, for detailed correlations see Table 04). One should note that although the average correlations are distinguishable from zero, the correlations of consideration with job performance and the correlations of initiating structure with job satisfaction were zero or negative in more than 10% of the examined studies.

All in all, the meta-analysis supports the common notion that consideration is more strongly related to satisfaction and motivation measures, whereas initiating structure is more strongly correlated with leader performance criteria. However, initiating structure shows weaker correlations to leader effectiveness than consideration does.

Table 04. Relationship of consideration and initiating structure to leadership criteria (Judge et al., 2004, p. 40)

	Consideration				Initiating Structure			
Criterion	***k***	***N***	$\bar{r}$	***ρ***	***k***	***N***	$\bar{r}$	***ρ***
Follower job satisfaction	76	11 374	.40	.46	72	10 317	.19	.22
Follower satisfaction with leader	49	7 871	.68	.78	49	8 070	.27	.33
Follower motivation	11	1 067	.36	.50	12	1 041	.26	.40
Leader job performance	25	2 330	.18	.25	22	2 085	.19	.24
Group-organization performance	27	2 008	.23	.28	27	2 079	.23	.30
Leader effectiveness	20	1 605	.39	.52	20	1 960	.28	.39

Note: k = number of correlations; N = combined sample size; $\bar{r}$ *= mean observed correlation; ρ= estimated true score correlation.*

The average corrected correlation between consideration and initiating structure is relatively weak (ρ = .17). 35% of the reported correlations are zero or negative. A large amount of the variation of these correlations (52.7%), however, can be explained by the way in which they were measured (i.e. LBDQ, LBDQ-XII, LOQ or SBDQ). The results show that correlations were strongest for LBDQ and LBDQ-XII (ρ = .44 resp. ρ = .46), whereas the LOQ and SBDQ consideration and initiating structure correlated negatively (ρ = -.08 for both measures; see Judge, 2004 #12}. This is in line with earlier results by Weissenberg and Kavanagh (1972).

Criticism

As the concept of consideration and initiating structure was one of the first dealing with leadership behavior, there is, of course, a lot one can criticize. Three points are often mentioned. Firstly, the correlations of the two factors with external criteria are often insignificant and the pattern of correlations is inconsistent (Korman, 1966; Staehle, 1999). “The only mostly consistent finding was a positive relationship between consideration and subordinate satisfaction” (Yukl, 2002, p. 52). The recent meta-analytic results (Judge et al., 2004) can repudiate this criticism, as a clear pattern of significant correlations appears and the study therefore supports earlier results by Kerr and Schriesheim (1974). However, the problem of causality, which is a common criticism of most leadership studies, is not solved with these results. Secondly,

situational variables are missing (Korman, 1966; Staehle, 1999). Only few studies analyzed the effects of possible moderators, whereby "the results are piecemeal and replication attempts have been rare" (Judge et al., 2004, p. 46). And, thirdly, as mentioned above, there are high correlations between consideration and initiating structure. Therefore, the assumption of orthogonality can not be maintained (Staehle, 1999). The meta-analysis of Judge et al. (2004) supports these results, yet also indicating that the strength and direction of the correlations depends on the questionnaire used. Furthermore,

> the correlations between the LBDQ ...Consideration and Initiating Structure scales were appreciably larger but not so large as to render the two concepts redundant. For example, the correlations among the transformational leadership dimensions (average r = .78), and even between transformational leadership and transactional leadership in the form of contingent reward (average r = .68), are far higher than the LBDQ Consideration and Structure correlation. (Judge et al., 2004, pp. 44/45)

All in all, one has to acknowledge that the shift in leadership research from trait to behavioral approaches is one of the major contributions to the study of leadership.

2.1.5. Situational approach

The failure to obtain consistent results with trait or behavior theories led to a focus on situational influences. The situational or contingency approach proposes that the effectiveness of a certain leadership style is situationally contingent, meaning that it will be effective in some circumstances but not in others. Those aspects of the situation that enhance the effects of the leader (or nullify them) are called 'situational moderator variables' (Yukl, 2002). Therefore, the contingency approach assumes that there is no universally appropriate leadership style or 'one-best-way'.

The first comprehensive contingency theory of leadership was proposed by Fiedler (Fiedler, 1964, 1967), who determined the situation using three aspects: the leader-member relations, the position power, and the task structure. The efficiency of a

leadership style (here Fiedler distinguished between person- and task-oriented leaders as measured by the LPC [least-preferred coworker] – score; according to Fiedler a fixed leadership style that cannot be changed), depends on the situational favorability. The situational favorability results from weighing and combining the three situational aspects (leader-member relations being the most important and position power the least important aspect). According to Fiedler's theory, the correlation of the leadership style and the leader's efficiency varies according to the situation: in very favorable or very unfavorable situations, low LPC-leaders (i.e. task-oriented) are more effective, in the intermediate favorable situations, the person-oriented leader is more effective. Fiedler's achievement was to introduce the first contingency theory of leadership and thereby he encouraged greater interest in situational factors. However, the theory has a lot of conceptual weaknesses. One of the more serious weaknesses is the measurement of leadership behavior. The LPC score is a "measure in search of a meaning" (Schriesheim & Kerr, 1977, p. 23), as its interpretation has been changed a lot of times. Its recent interpretation is still speculative (Staehle, 1999). The discordance of results, especially of those not obtained by Fiedler's scholars (Neuberger, 2002), or the one-sided reflection of efficiency as being a pure task efficiency can be noted as being other weaknesses of the theory.

Another approach to overcome the inconsistent findings in the context of behavior theories is the path-goal theory of leadership (Evans, 1970; House, 1971). The path-goal theory "addresses the effects of leaders on the motivation and abilities of immediate subordinates and the effects of leaders on work unit performance" (House, 1996, p.323). It represents an application of the expectancy-theory of motivation (e.g. Vroom, 1964). Hence, the efficiency of the leader depends on his ability to positively influence the subordinates' expectancy of instrumentalities and valences and the probabilities of rewards.

> The motivational functions of the leader consist of increasing personal payoffs to subordinates for work goal attainment and making the path to these payoffs easier to travel by clarifying it, reducing roadblocks and pitfalls, and increasing the opportunities for personal satisfaction en route. (House, 1971, p. 324)

Later formulations of the theory (House & Mitchell, 1974) expanded the number of leadership behaviors relevant to the motivational processes emphasized by the theory to four: supportive leadership, directive leadership, participative leadership, and achievement-oriented leadership. The initial version only dealt with supportive leadership (similar to consideration) and directive leadership (similar to initiating structure) (Yukl, 2002). The extent to which each of these leader behaviors will have a positive impact upon subordinate performance and satisfaction is contingent upon two aspects of the situation: subordinates characteristics and environmental or task characteristics. According to House and Dessler (1974), "leader behavior will be viewed as acceptable to subordinates to the extent that the subordinates see such behavior as either an immediate source of satisfaction or as instrumental to future satisfaction" (p. 31). Furthermore, subordinate's locus of control and experience are important variables. On the side of the environmental characteristics, the efficiency of leader behavior will depend upon the nature of the task. It the task is highly structured, directive leadership might lead to excessive control and therefore dissatisfaction, whereas this type of leadership behavior might be successful with unstructured tasks (Bryman, 1992; Yukl, 2002). Other influencing environmental characteristics are the formal authority system or the nature of the work group. The problems of path-goal theory lie within inconclusive results, methodological limitations, only fragmentary testing of the theory, the use of expectancy theory as a basis, or the reliance on broad categories of leader behavior. "Despite its limitations, path goal theory has made an important contribution to the study of leadership by providing a conceptual framework to guide researchers in identifying potentially relevant situational variables" (Yukl, 2002, p. 216).

Other representatives of the contingency approach are Hersey and Blanchard's (1969) situational leadership theory, Kerr and Jermier's (1978) theory of leadership substitutes, Yukl's (1981, 1989) multiple-linkage model, or the cognitive resources theory developed by Fiedler and his colleagues (Fiedler, 1986; Fiedler & Garcia, 1987).

This chapter does not claim to provide an all-embracing overview of the history of leadership theories but rather offers short insights into a broad field of research and approaches to leadership. Approaches such as the attribution theory are missing as every selection of leadership theories will have to be cut short at some point. As the focus of this paper is on transformational leadership and its measurement, the next chapters will provide a more detailed view on these issues.

2.2 Transformational leadership

> By the early 1980s, there was a general sense of pessimism about leadership theory and research. The enormous output of leadership researchers seemed to have yielded little that could be clung to with any certainty. … Out of this pessimism emerged a number of alternative approaches, which shared some common features. (Bryman, 1992, pp. 20/21)

These leadership theories can be subsumed under the name of new leadership theories. They arose with the surge in interest concerning the re-engineering of organizations and are centered around the promotion of change and development in individuals, groups and organizations. As such, they are opposed to the transactional theories known up to now that are primarily concerned with the exchange processes between leader and follower. "In a rapidly changing world, … the reliance on developing transactional leadership styles will clearly fall short of the leadership challenges confronting most organizations today" (Bass & Avolio, 1997, p. 1). Therefore, there have been numerous theories that try to identify leadership behavior that initiates and facilitates the various essential transformations in organizations. One of the most popular of these theories is transformational or transforming leadership.

> Transforming Leadership is vision, planning, communication, and creative action which has a positive unifying effect on a group of people around a set of clear values and beliefs, to accomplish a clear set of measurable goals. This transforming approach simultaneously impacts the personal development and corporate productivity of all involved. (Anderson, 1992, p. 37)

Amongst the researchers that examined transformational leadership, Bass (1985) takes a prominent place. His program has been significant primarily because he has sought to conduct systematic research into the field of transformational leadership by employing a measurement-based framework. His starting point was Burns' (1978) book on transformational political leaders.

The first mention of transformational leadership was in Downtown's (1973) book, a social treatise, and independently in Burns (1978) conceptualization. Burns identified two different leadership styles which he named transformational and transactional leadership, based upon a series of qualitative analyses of several political leaders' biographies. The relation of transactional leaders to their subordinates is based on a system that exchanges rewards for certain achievements. Transactional leaders "approach followers with an eye to exchanging one thing for another" (Burns, 1978, p. 3). However, the transformational leader and his followers mutually find a higher level of motivation and moral. The leader raises the follower's consciousness levels about the importance and value of designated outcomes and ways of achieving them. "Burns (1978) dwelt on transformational leaders moving their followers upward on Maslow's hierarchy from need for safety and security to need for achievement and self-actualization. But he also noted that such leaders moved their followers to transcend their self-interests" (Bass, 1995, p. 294). Transformational leaders attempt to satisfy their followers' needs and to engage the entire person. Their relationship is mutually inspiring and elevating. Hence, the social consciousness of all involved is raised. The transformational dynamic is based on a strong personal identification with the leader, a shared vision of the future and overcoming selfish interests. One can speak of transformational leadership "when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality" (Burns, 1978, p. 20). Burns' transformational leadership construct consists of three separate dimensions: heroic leadership, intellectual leadership, and ideological leadership. Heroic leadership involves a strong belief in the leader, and his ability to achieve goals and handle crises. This facet is similar to what House (1977), for example, labeled charisma, but was labeled differently by Burns (1978) as he thought that the word charisma has lost its meaning. Intellectual leadership entails questioning, examining, criticizing, and imagining, as well as values and purposes. Ideological leadership describes leaders whose utmost importance lies upon the good of the group. In Burns' conceptualization the two leadership styles of transactional and transformational leadership are situated at two opposite poles of the leadership continuum and are therefore exclusive. Hence, a person either leads transformationally or transactionally.

2.2.1. Bass' conception of transformational and transactional leadership

Inspired by Burns' work, Bass (1985) transferred the concept of transformational leadership to organizational contexts. However, in contrast to Burns, he stated that transformational and transactional leadership were not exclusive but built upon each other. Leaders who identify the needs of their followers and exchange rewards for acceptable results are regarded as transactional executives. Transformational leadership is seen to be moving beyond transactions in order to improve followers' achievements by influencing their needs and values. Higher levels of performance and extra effort, as well as higher satisfaction, are expected on behalf of the followers.

Transactional leadership

Bass (1985) characterizes a transactional leader as someone who operates within existing cultures or systems. He clarifies task standards and rewards the subordinates; these rewards can be gotten if they accomplish their tasks. He tries to avoid risks and focuses his attention on the breaking of agreements. He works the most effective in a stable and predictable environment. "Transactional leadership refers to the exchange relationship between leader and follower to meet their own self-interests" (Bass, 1999b, p. 10). Therefore, transactional leadership is characterized by behaviors and attitudes that emphasize the quality of exchange between superiors and followers. Leader and follower discuss what is required as well as the resources or conditions that are needed in order to reach the aims. Their "fair negotiation" concerning demands and rewards is based on mutual agreement. Transactional leaders clarify each person's tasks, responsibilities, and expectations, find a common meaning as to what is fair and only give rewards if the requirements are fulfilled. "Transactional leaders offer inducements to move in the direction desired by the leaders, which often is a direction that would also satisfy the self-interests of the followers" (Avolio, 1999, p. 35). They emphasize goal setting, give instructions, clarify structures and conditions, and take control. Depending on performance etc. they choose positive or negative contingent reinforcement as their strategy. In its constructive form, transactional leadership comprises working with individuals, setting up and defining agreements to achieve specific work goals, discovering individuals' capabilities, and specifying the

compensation and rewards for a successful completion of tasks. In its corrective form, transactional leadership focuses on setting standards as well as identifying and managing mistakes by either waiting for them to occur before taking action or by monitoring for their occurrence (Bass & Avolio, 1997). Although transactional leadership is the most widely used leadership behavior, it cannot guarantee motivated followers and thereby long-time organizational success (Yammarino & Bass, 1990). Hence, transactional leadership should be completed by transformational leadership (Bass, 1985).

Transformational leadership

> Transformational leadership refers to the leader moving the follower beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration. It elevates the follower's level of maturity and ideals as well as concerns for achievement, self-actualization, and the well-being of others, the organization, and society. (Bass, 1999b, p. 11)

The transformational leader tries to widen the interests of his subordinates and to evoke the acceptance for the mission of the group (Bass, 1990a). He takes the time to get to know the people he works with, what they need to know to perform at their best, and how far they can be challenged and supported (Avolio, 1999). He looks for new directions that can be taken and evaluates the chances when taking risks but does not support the status quo. Rather than reacting to changes in the environment, he tries to be actively involved. Transformational leaders motivate others to achieve more than they think is possible by addressing and modifying their subordinates' values and self-esteem. "Transformational leaders get their followers to 'buy into' their visions and internalize them so that the followers become intrinsically motivated to strive for the common goals and visions" (Goodwin, Wofford, & Whittington, 2001, p. 772). Furthermore, they inspire them to go beyond their egoistic interests. Bass (1998) points out that transformational leaders shift goals away from personal interests and security towards achievement, self-actualization, and the greater good. As a consequence,

followers are ready to show extra effort to achieve these aims. The transformational process implies changing the followers' needs and values in order to accomplish higher-order objectives. "The application of transactional leadership must take into account individual needs. When these needs are elevated, the leadership exchange begins its shift from transactional to transformational leadership" (Bass & Avolio, 1997, p. 26). The transformational dynamic involves a strong personal identification with the leader, a joint vision of the future, and going beyond the self-interest exchange for rewards (Hater & Bass, 1988).

According to Bass and Avolio (1994),

> transformational leadership is seen when leaders:
>
> - stimulate interest among colleagues and followers to view their work from new perspectives,
> - generate awareness of the mission or vision of the team and organization,
> - develop colleagues and followers to higher levels of ability and potential, and
> - motivate colleagues and followers to look beyond their own interests toward those that will benefit the group. (p. 2)

Furthermore, Bass and Avolio (1997) state that

> transformational leaders achieve their results in one or more of several ways:
>
> - Transformational leaders become a source of inspiration to others through their commitment to those who work with them, their perseverance to a mission, their willingness to take risks, and their strong desire to achieve.

- Transformational leaders diagnose, meet, and elevate the needs of each of their associates ... They believe in promoting continuous people improvement.
- Transformational leaders stimulate their associates to view the world from new perspectives, angles, and informational sources. They question even the most successful strategies to improve them over time.
- Associates trust their transformational leaders to overcome any obstacle, because of their hard work, their willingness to sacrifice their self-interest, and their prior successes. (pp. 27/28)

All in all, transformational leadership refers to a different level within the leader-subordinate relation. Bass (1990a) therefore also calls it 'superior leadership performance'.

One has to emphasize the fact that self-abandonment and blind following are not goals of transformational leadership. The aim of transformational leadership is the empowerment of the followers and their involvement in the organizational process, as well as the encouragement of self-confidence and autonomy (Oelsnitz, 1999). The true transformational leader has confidence in his followers' ability to find their own solutions to the problems they face (Lowe, Kroeck, & Sivasubramaniam, 1996).

Both styles - transformational and transactional leadership - are not independent or opposing behavioral patterns. Leaders can act in a transformational and in a transactional manner. According to Bass, Avolio, & Goodheim (1987), transformational leadership is ineffective without transactional leadership, as it is built upon it, but not vice versa.

> You may wonder how transactions are at the base of transformations. … [If] you honor all your various transactions with people, over time they come to trust you; and it is higher levels of trust versus compliance that transformational

> leadership uses as its base for achieving exemplary performance. (Avolio, 1999, p. 37)

Hence, transformational executives combine transformational and transactional behaviors individually and therefore vary widely in their respective style of leadership (Bass, 1990a). As both leadership styles aim to attain certain objectives, transformational leadership can also be seen as a special case of transactional leadership (DenHartog, VanMuijen, & Koopmann, 1997). The models differ only in relation to the process by which the leader motivates his subordinates and in the type of objectives he sets (Hater & Bass, 1988).

According to Bass (1997), transformational leadership is effective in any situation or culture. The effectiveness of transformational leadership has been shown for different levels of authority, in different types of organizations and in several different countries. No conditions are specified in which transformational leadership is ineffective. "However, universal relevance does not mean that transformational leadership is equally effective in all situations or equally likely to occur. A number of situational variables may increase the likelihood of transformational leadership or enhance its effect on followers" (Yukl, 2002, p. 255). Examples include the external environment – an unstable environment being beneficial for transformational leadership.

> If the technology, workforce and environment are stable..., then things are likely to move along quite well with managers who simply promise and deliver rewards to employees for carrying out assignments .... But when a firm is faced with a turbulent marketplace...and when its current technology can become obsolete before it is fully depreciated; then transformational leadership needs to be fostered at all levels in the firm. (Bass, 1990a, p. 30)

Further examples are the type of organization – an organic structure is rather beneficial than a mechanistic bureaucracy (Bass, 1998), the hierarchical level – transformational leadership is more likely to occur in higher hierarchical levels (Bass & Avolio, 1993a), or an entrepreneurial culture (Yukl, 2002).

2.2.2. The Full Range of Leadership

Prior to the development of the new leadership theories, leadership theories and research have centered on questions such as autocratic vs. democratic, directive vs. participative, task vs. relationship centered, or initiation vs. consideration (Bass, 1990c). Bass and his colleagues wanted to identify the full range of leadership. According to their conception of the full range of leadership, it implies that every leader displays a frequency of transactional and transformational behaviors, as well as non-leadership behaviors. However, each leader's profile involves more or less of one of those leadership behaviors. Although attempts to present an integrative theory of leadership have already been made, Antonakis and House (2002) argue that the full range leadership theory will be more successful, "because …[it]:

1) has achieved unprecedented acceptance in the management and leadership literatures;

2) is supported by a large number of empirical findings; and

3) has been developed in an integrative manner." (p. 4)

Facets of transformational leadership

The transformational leadership behavior facets that are identified by Bass and his colleagues can be labeled as the 'Four I's' of transformational leadership behavior (Bass & Avolio, 1994).

Idealized Influence

"Transformational leaders have associates who view them in an idealized way, and as such, these leaders wield much power and influence over their followers" (Bass & Avolio, 1997, p. 28). Idealized influence (II) is the capability of exerting influence by serving as a role model, arousing pride in followers, and demonstrating high standards of ethical and moral conduct. Such leaders show high performance standards, fulfill what they expect others to do and can be counted on to do the right thing. They earn trust and confidence. Those leaders share risks with followers and are consistent in their actions. They even take the risk of replacement for the greater gain obtained when their followers are fully capable of contributing to the overall mission. They overcome obstacles and create identification with the mutual vision. Their legitimacy is based on

their personal integrity and competence. Followers develop a high degree of admiration and respect for them and try to emulate them. Transformational leaders avoid using power for personal gain and only implement it when needed. As idealized influence reflects behavioral aspects as well as attributional components, this facet is divided into two sub dimensions: idealized influence attributed (IIA[2]) and idealized influence behavior (IIB).

Inspirational Motivation

Transformational leaders behave in ways that motivate and inspire their followers by providing meaning and challenge to their followers' work. Inspirational motivation (IM) is the ability to develop and communicate a convincing and attractive vision of the future. This vision addresses the higher order needs of the followers. Additionally, inspiring leaders spread optimism about the possibility of reaching the company's goals, always encouraging subordinates to believe that their efforts will be successful, and articulate a vision in a symbolic language that is shared by the workers. "Often, inspiration can occur without the need for identification of associates with the leader" (Bass & Avolio, 1997, p. 28).

Intellectual Stimulation

Transformational leadership furthermore involves the intellectual stimulation (IS) of associate's ideas and values. IS includes various kinds of involvement and participation. Followers are stimulated by questioning assumptions, reframing problems and challenging tasks. They are encouraged to think about old problems in new ways and to question their own beliefs and assumptions, and, when appropriate, those of the leader. Individual member's mistakes are not criticized in public. Creativity and innovative solutions are required and encouraged in a supportive climate. Therefore, the followers learn to handle and solve problems on their own. The leader stimulates the awareness of his follower's thoughts and imagination, and recognition of their beliefs and values. "Nothing is too good, too fixed, too political, or too bureaucratic that it can't be challenged, changed, retired, and/or abandoned" (Avolio, 1999, p. 46).

[2] For an overview of the used abbreviations also see the enclosed bookmark.

Transformational leaders become "intellectually stimulating to the extent that they can discern, comprehend, conceptualize, and articulate to their associates the opportunities and threats facing their organization, as well as its strengths, weaknesses, and comparative advantages" (Bass & Avolio, 1997, p. 29). It is through IS that the status quo of the organization is questioned (Bass, 1985).

Individualized Consideration

Individualized consideration (IC) stands for leaders who pay special attention to each individual's needs for achievement and growth by acting as a coach or mentor. They recognize individuals' needs and try to elevate their followers to successive higher levels of potential. Individually considerate leaders listen effectively. They delegate tasks as means of developing their followers. This also includes the communication of timely information to others as a way of providing continuous feedback. "Delegated tasks are monitored to see if the followers need additional direction or support and to assess progress; ideally, followers do not feel they are being checked" (Hinkin & Tracey, 1999, p. 109). Furthermore, the acceptance of individual differences concerning varying needs of autonomy, encouragement, responsibility, or even structure and instructions, is important. Subordinates are not reduced to their function and role as employees but are considered to be unique individuals. Transformational leaders focus on one-to-one relationships through IC.

These four I's characterize the transformational leader. "Yet transformational leaders vary widely in their personal styles" (Bass, 1990a, p. 23). That means that *the transformational leader* does not exist. Instead, transformational leaders are characterized by applying the transformational behaviors more than the transactional leadership facets. Hence, they can be very charismatic and less intellectually stimulating or vice versa.

Short digression No. 1: The importance of charisma for transformational leadership

In his first conceptualization, Bass (1985) identified three important facets of transformational leadership: charisma, intellectual stimulation and individualized consideration, with charisma being "the fundamental factor in the transformational process" (Deluga, 1988, p. 457). The latter two are still part of the more recent

conceptualizations (Bass & Avolio, 1995a; Bass & Avolio, 1997). The factor charisma, however, was subdivided into idealized influence and inspirational motivation. Reasons for this being conceptual criticism on the operationalization of charisma, the bad connotation attached to charisma, particularly in Europe or Asia, and the various meanings it has in the public mind ranging from celebrated to flamboyant and personable (Bass, 1995).

However, transformational and charismatic leadership are often treated equally (Hunt, 1999). Reasons for that may be the nearly isochronic upcoming of research concerning transformational and charismatic leadership, or their theoretical similarity and empirical overlapping. Both streams of research diverge from religious and mystic aspects or the extraordinary, superhuman capabilities of outstanding heroes of the first charisma theories (Weber, 1922/1976) and the charismatic styles identified later (see above). They changed the former concepts towards a more behavior-orientated and pragmatic perspective. Key aspects of both, charismatic and transformational leadership, are value-based attractive visions, inspiration, role modeling, support of personal growth, trust and consideration of followers' needs (Alimo-Metcalfe & Alban-Metcalfe, 2001; Bass, 1985; Conger & Kanungo, 1987; House, 1977; House & Podsakoff, 1994; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Central to both theories is that by influencing followers' values, self-esteem and self-concept, these show higher levels of effort, performance, satisfaction and commitment (Bass, 1985; Shamir, House, & Arthur, 1993). Furthermore, in Bass' literature review for the first conceptualization of the transformational leadership theory, Weber's (1922/1947) and House's (1977) treatises on charismatic leadership were, amongst others, important markers (Bass, 1995).

Yet, for Bass, charisma is only a part of transformational leadership, "the three additional transformational factors, although intercorrelated with charisma, are conceptually distinct from charisma" (Bass & Avolio, 1993a, p. 62). Bass and Avolio argue that an intellectually stimulating leader does not have to be charismatic to encourage followers to consider old problems in new ways, and neither do inspirational or individually considerate leaders have to be charismatic. "Charismatic leaders do not necessarily consult with followers…before using their personal power to direct and even coerce followers whose needs are being met by the followers' emotional identification with their leaders" (Bass, 1990b, p. vii). Charisma, although being a very

important or the largest component of transformational leadership (Bass, 1995; Bryman, 1992), it is not the only part of transformational leadership. The other components are theoretically or practically important, as they deal with other behaviors and effects (Bass, 1995). Furthermore, "the leader who is personally charismatic with his or her 'own agenda' is often set up as an idol, not idealized, and he or she falls way short of being transformational" (Bass & Avolio, 1997, p. 28).

It is difficult to directly compare charismatic and transformational leadership because of conceptual ambiguity and a lack of consistency in their definitions. Yukl (2002) argues:

> Many of the leadership behaviors in the theories of charismatic and transformational leadership appear to be the same, but there may be some important differences as well. Transformational leaders probably do more things that will empower followers and make them less dependent on the leader, such as delegating significant authority to individuals, developing follower skills and self-confidence, creating self-managed teams, providing direct access to sensitive information, eliminating unnecessary controls, and building a strong culture to support empowerment. Charismatic leaders probably do more things that foster an image of extraordinary competence, such as impression management, information restriction, unconventional behavior, and personal risk taking. (p. 261)

Whereas transformational leaders are supposed to be found in any organization, charismatic leaders are rather rare, their appearance dependent on favorable conditions such as crises. It is not possible to answer the question of the existing diversity or similarity between transformational leadership and charisma at this point. Therefore, in this paper, charisma is treated as one facet of transformational leadership.

Facets of transactional leadership

In contrast to transformational leadership, transactional leadership creates the leader-employee relationship on the basis of contingent positive and negative reinforcement in

the sense of the exchange theory (see e.g. Blau, 1964; Gergen, 1969; Homans, 1974; Thibaut & Kelley, 1959). “Transactional leadership occurs when the leader rewards or disciplines the follower, depending on the adequacy of the follower’s behavior or performance” (Avolio, 1999, p. 49). It can be divided into three behavioral facets:

Contingent Reward

Contingent reward (CR) enables the followers to perceive the consistency in leadership behavior as well as the reliability of their leaders. “The leader assigns or secures agreements on what needs to be done and promises rewards or actually rewards others in exchange for satisfactorily carrying out the assignment” (Avolio, 1999, p. 49). Those rewards are connected to the followers’ needs, which are identified by the leader and linked to what the leader wants to accomplish. The workers can rely on the honoration by their leaders for their efforts through instrumental support or assistance in confrontations with superiors. CR builds the basis of the receptivity of transformational leadership (Bass & Avolio, 1995a).

Management by exception

Management by exception (MbE) describes a leader who only acts if there are deviations of standards, his motto is “if it ain´t broken don´t fix it” (Bass, 1990a, p. 20). The most ‘positive’ reward in this case is the absence of criticism. MbE may appear in a more active way (management by exception active - MbEa) when there is active monitoring and correction before things go wrong, or in passive way (management by exception passive - MbEp) when executives wait passively and react when mistakes or problems occur (Bass & Avolio, 1994). “The active manager arranges to monitor and correct deviations; the passive manager waits for them to occur before taking corrective action” (Bass & Avolio, 1993a, p. 61).

Finally, a facet of non-leadership is also part of the full range of leadership:

Laissez-Faire

Laissez-Faire (LF) is the avoidance or absence of leadership. In its extreme, nothing is transacted between the leader and the follower. The leader delays decisions, gives

neither instructions nor feedback, there is no attempt to motivate followers nor does the recognition and satisfaction of their needs take place. Laissez-faire leadership is the most ineffective leadership (resp. non-leadership) style in the full range of leadership.

Taking all the different styles and behavior facets together, the *full range of leadership*, according to Bass and Avolio (1994), is represented. As already mentioned, every leader displays each of the above described leadership styles to some degree. An optimal profile is characterized by a very high level of transformational behavior (i.e. the four I's), a high degree of CR, some MbEa, less frequent MbEp and a minimum of LF. An ineffective leader shows a lot of LF, MbEp and MbEa, less CR and much less, if any, transformational leadership (Avolio, 1999; Bass & Avolio, 1994; see Figure 02).

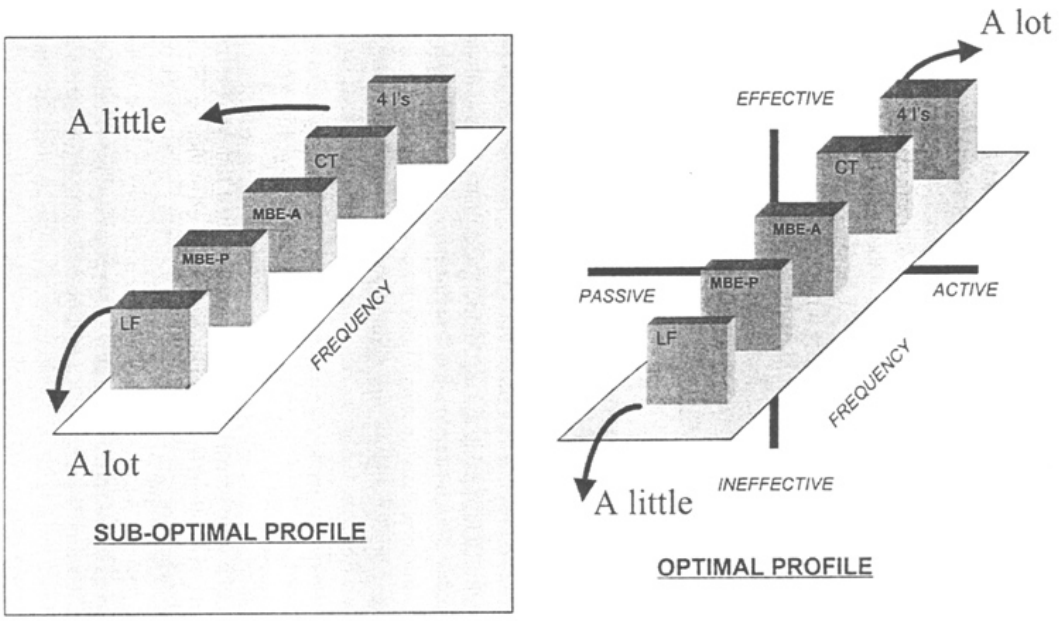

Figure 02. Leadership profiles for the full range of leadership (Avolio, 1999, p. 53)

Although these components display a broad range of leadership behaviors, there is more to leadership than described in this chapter. Avolio (1999) therefore uses *a* full range rather than *the* full range,

> suggesting that other aspects of leadership yet to be discovered will enhance the range of leadership processes in organizations. Nevertheless, I have set out to

challenge you and my colleagues to think about a broader or 'fuller' range than is often associated with leadership measurement and development. (p. 33)

However, leadership components that have already been identified are not part of the full range of leadership as described by Bass, Avolio and colleagues.

In extension to the conceptualization of the optimal and sub-optimal leadership profile, Bass and his colleagues argue, that, as already mentioned, the addition of transformational leadership to transactional leadership leads to extra effort being made by the followers and therefore results in superior performance. This is called the augmentation effect of transformational leadership (see Figure 03).

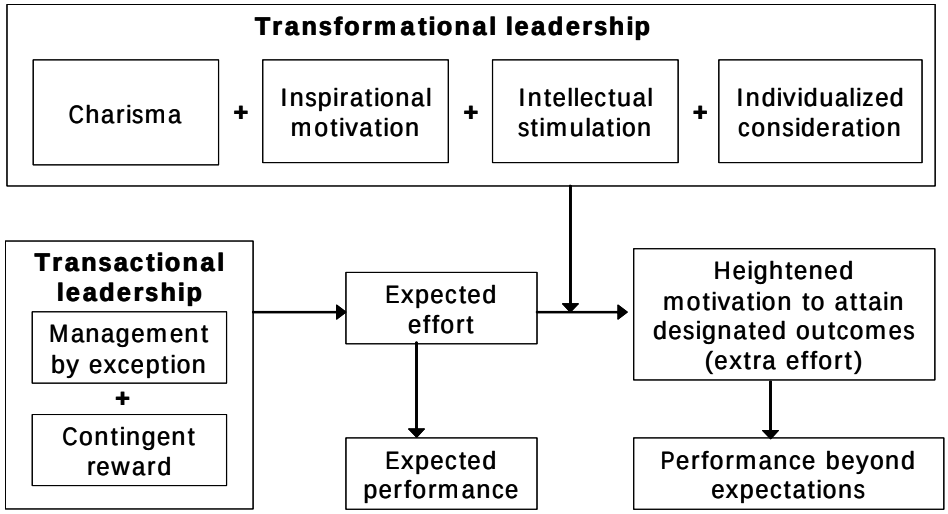

Figure 03. Augmentation model of transactional and transformational leadership (Bass & Avolio, 1997, p. 21)

2.2.3. Other conceptions of transformational leadership

Although Bass might be the one who had the most impact on the research of transformational leadership, he was not the only researcher that sketched a theoretical framework of this new leadership. Tichy and Devanna (1986) were more concerned with the process of transforming or revitalizing organizations in order to succeed in a turbulent, competitive environment than with the individual transformation. However, they also identify leadership behaviors that differentiate transformational from transactional leaders. In their conception, transformational leaders are courageous, yet

pragmatic and realistic. Furthermore they are sensitive to their followers' needs, they empower and believe in them. They are able to learn from their mistakes and deal well with ambiguity and complexity. "Finally, they typically have a vision involving change that they are able to communicate in a manner which allows others to share the vision" (Castro, 1998, p. 32).

Podsakoff et al.'s conception of transformational leadership

Another conception of transformational leadership was proposed by Podsakoff, et al. (1990). After reviewing the literature on the topic of transformational leadership that was up-to-date back then, Podsakoff et al. agreed on six key behaviors of transformational leaders. With these scales, the authors do not offer any new theoretical development, but merely claim to identify and summarize those dimensions that have been proposed by most of the other authors in the field of the new leadership theories, i.e. transformational and charismatic leadership:

- *Identifying and articulating a vision (IAV)* – Behavior on the part of the leader aimed at identifying new opportunities for his or her unit/division/company, and developing, articulating, and inspiring others with his or her vision of the future.
- *Providing an appropriate model (PAM)* – Behavior on the part of the leader that sets an example for employees to follow that is consistent with the values the leader espouses.
- *Fostering the acceptance of group goals (FAGG)* – Behavior on the part of the leader aimed at promoting cooperation among employees and getting them to work together toward a common goal.
- *High performance expectations (HPE)* – Behavior that demonstrates the leader's expectations for excellence, quality, and/or high performance on the part of followers.

- *Providing individualized support (PIS)* – Behavior on the part of the leader that indicates that he/she respects followers and is concerned about their personal feelings.
- *Intellectual stimulation (IS_2[3])* – Behavior on the part of the leader that challenges followers to re-examine some of their assumptions about their work and rethink how it can be performed. (Podsakoff et al., 1990, p. 112)

House and Podsakoff (1994) review the theory and research on leadership effectiveness. They re-label what was formerly named charismatic, visionary or transformational leadership into outstanding leadership, arguing that those theories are all concerned with leaders whose organizations achieve outstanding results. "A common set of behaviors have been shown to differentiate outstanding from ordinary leaders" (House & Podsakoff, 1994, p. 58), and the authors propose ten of them as typical of outstanding leaders, mentioning however that the manifestations of these behaviors may vary. Those ten behavioral categories are: articulation of an ideological vision, high degree of confidence, image building, role modeling, external representation, high performance expectations and confidence, motive arousal, frame alignment, and inspirational communication. Furthermore, House and Podsakoff exclude three behaviors from being outstanding leadership: individualized consideration, intellectual stimulation, and environmental sensitivity. The first two behaviors are central to Bass's theory of transformational leadership (see above), environmental sensitivity is seen as a facet of charismatic leadership by Conger and Kanungo (1988). House and Podsakoff (1994) argue that these behaviors must be displayed by ordinary (or transactional) managers in order for them to be effective, but are not unique to outstanding leadership. Alimo-Metcalfe and Alban-Metcalfe (2001) developed a new questionnaire to assess transformational leadership, as they were concerned about the generalizability of the American models of transformational leadership to UK settings. Their theoretical and empirical examination lead to nine facets of transformational leadership: genuine concern for others; political sensitivity and skills; decisiveness, determination, self-

[3] The supplement "_2" is added in order to avoid confusion with the abbreviations of the MLQ scales.

confidence; integrity, trustworthy, honest and open; empowers, develops potential; inspirational networker and promoter; accessible, approachable; clarifies boundaries, involves others in decisions; encourages critical and strategic thinking.

2.2.4. Criticism

All the new leadership theories make an important contribution to our understanding of leadership. In particular, they try to explain the exceptional influence some leaders have on their followers, focusing on the importance of emotional reactions, whereas earlier theories had their focus on the rational-calculative aspects of the leader-follower relationship. However, their uniqueness and contribution have been exaggerated (Yukl, 1999a).

> Although clothed in different jargon, some of the "new" wisdom reflects themes that can be found in theories from the 1960s. … Some of the leadership behaviors in the new theories are very similar to behaviors identified as important in research that preceded it in the 1970s. (Yukl, 2002, p. 262)

The leader's emphasis on IS is comparable with some aspects of the path-goal theory (Hunt, 1999), IC and active monitoring are already represented in earlier research. Moreover, IS and charisma are vague about what the leader really does (Yukl, 1999a). The underlying influence processes of transformational leadership remain unclear, plus they have never been studied in a systematic manner. Yukl (1999b) refers to "short-term effects of the leader's behavior on mediating variables relevant to task performance, examples for this being the arousal of motives or emotions, increased self-efficacy or optimism, modification of beliefs about reward contingencies, and increased task commitment" (p. 287). If the ways in which each transformational behavior affects these variables and the respective outcomes were identified, the theory would certainly gain strength. The negative aspects of transformational leadership have seldom been the focus of research. At least the ethics of transformational leadership have been taken into consideration (Banerji & Krishnan, 2000; Bass & Steidlmeier, 1999), shedding a little more light onto the liabilities of leaders who appear to be transformational, but are not (Conger & Hunt, 1999).

Each facet of transformational leadership is composed of several components and they have overlapping contents, which leads to an even more ambiguous definition of the transformational scales. For example, IC includes both developing and supporting. Whereas developing, with its components coaching and mentoring, is a core transformational behavior, supporting, which includes being friendly, helpful and considerate of individuals, is not, as it only has a weak effect on subordinate motivation or performance. IS is also composed of diverse behaviors, such as looking at problems in a different way or finding innovative solutions for problems. The theory, however, lacks a definition of ways in that such a behavior is encouraged by the leader. The content of II ranges from the leader's expression of beliefs, his consistent acting on these beliefs, clarifying the purpose of subordinate activities, all the way to emphasizing the importance of mutual trust. Even attributed charisma, which is an outcome rather than observable behavior, is part of II. Considerable overlap exists between II and IM which are not clearly differentiated in the theory. On the other hand, important leadership variables are missing. As already mentioned, the notion of a *full range of leadership* is misleading in that important leadership behaviors are missing. On the transformational side, a more direct integration of empowering behaviors, such as consulting, delegating or sharing of sensitive information, are omitted. Furthermore, some aspects of charismatic leadership are also missing (nontraditional behaviors, impression management, expressive communication) (Yukl, 1999a). Yukl (1999b) also states that a full range of leadership theory should include behaviors that are neither transformational nor transactional. Examples would be task-oriented behaviors such as clarifying or planning, relations-oriented behaviors such as networking or the leader interactions with superiors, peers and outsiders, and change-oriented behaviors such as scanning or political activities to build support for change. Antonakis and House (2002) support the idea of adding leadership behaviors that are distinct from transformational, transactional and LF leadership. The class of leadership behavior that is missing in the full range model (in their understanding) can be labeled instrumental leadership and contains two subclasses of behavior. The first is called strategic leadership and contains environmental monitoring, and strategy formulation as well as implementation; the second subclass can be subsumed under the name of follower work facilitation and contains path-goal facilitation and outcome monitoring. As the theory of transformational leadership only focuses on dyadic processes, the side of the leader's influence on group or organizational processes (e.g. building group identification) is

also omitted. Although providing research on the effectiveness of transformational leadership in teams and even a team-questionnaire, the theoretical basis for the influence of transformational leadership on team building and stabilizing processes has not yet been clarified. The emphasis on the universal applicability and effectiveness of transformational leadership has been too strong. More attention still needs to be focused on identifying situational variables that determine the support of effective transformational leadership or its limits (Gebert, 2004; Wegge, 2004; Yukl, 1999b). Only a small number of studies have examined contextual variables (see e.g. Howell & Avolio, 1993; Podsakoff, MacKenzie, & Bommer, 1996). Situations where transformational leadership has detrimental effects have rarely been the subject matter of research. However, Stephens, D'Intino, and Victor (1995) argue that transformational leadership is biased, favoring some stake-holders (e.g. the top management) at the expense of most of the employees as its emphasis is on increasing task motivation and performance. Furthermore, if members of an organization are influenced by leaders with competing visions, the result will be increased role ambiguity and role conflict (Yukl, 1999b). A more conceptual criticism concerns the allocation of MbE to the transactional leadership behaviors. Especially MbEp, which describes a leader who waits until problems become serious, does not describe a process of transaction but is rather close to non-leadership behaviors. As already mentioned, Bass (1985) considers charisma to be an important part of transformational leadership, being conceptually distinct from the other transformational behaviors. Yukl (1999b), however, states that the simultaneous occurrence of the four I's is unusual and instable. Usually, more participation and development of the subordinates does not produce the attribution of extraordinary abilities, hence the attribution of charisma. On the whole the transformational leadership theory "should not be heralded as a revolutionary approach that makes all the earlier theories obsolete" (Yukl, 1999a, p. 47).

2.3 The Multifactor Leadership Questionnaire

Despite, or in parts because of, the aforementioned criticism, transformational leadership is the most intensively studied leadership construct between 1990 and 2003 (Judge & Piccolo, 2004). Central to Bass' research effort and theory development is the Multifactor Leadership Questionnaire (MLQ), which has been developed in order to provide a measurement of the components of transformational and transactional

leadership. The MLQ appears to be the primary quantitative instrument for measuring transformational leadership (Lowe et al., 1996). The labeling *the* primary quantitative instrument, however, is misleading, insofar as there are a variety of different versions of the MLQ (Castro, 1998).

2.3.1. Development of the MLQ

The initial development of the questionnaire began with a response allocation analysis (Bass, 1995). The descriptions of a transformational leader they know, obtained from 70 male South African senior executives, became the source for the first set of items. The senior executives had to identify a person who broadened their horizon, elevated their motivation onto a higher level in the Maslow hierarchy, or induced them to defer their own interests for the good of the group, organization or society [according to Burns' (1978) definition of a transformational leader; Bass, 1997]. Furthermore, they were to describe how, in their opinion, leaders manage to induce their subordinates to put back their own interests for the good of the group. On the basis of these responses, as well as on a literature review on charisma and contingent reinforcement, 142 items were developed. These items were presented to 11 graduate MBA and social science students. Those students were presented with a definition of transformational and transactional leadership beforehand and asked to do further reading on the subject. They then separately sorted the items into the three categories of transformational and transactional behavior or 'can't say'. An item was considered transformational if 8 or more of the 11 students identified it as transformational and none or one classified it as transactional. An item was selected as transactional if 9 or more students judged it to be transactional and less then two as being transformational.

A set of 73 items resulted as the first draft of the questionnaire, the version MLQ 1 (Bass, 1985), with a 5 point Likert-scale as answer format, ranging from 0 (not at all) to 4 (frequently, if not always). This questionnaire was given to a sample of 104 U.S. Army officers. "Principle components factor analysis provided most of the conceptual framework for what followed" (Bass, 1995, p. 471). Seven factors with eigenvalues greater than 1 emerged, accounting for 89.5% of the variance (Castro, 1998). A re-analysis of the data, with an additional 72 officers in the sample, provided a five factor solution. These five factors were labeled: charisma (being composed of 18 items with

loadings greater than .70), contingent reward (7 items), individualized consideration (7 items), management-by-exception (6 items), and intellectual stimulation (3 items). Charisma accounted for 66% of the variance, the other two transformational scales for 6.3% of variance each, CR also accounted for 6.3% of the variance, MbE for 3.1% (Bass, 1985). Within the charisma items, Bass (1985) noted a three item cluster he believed was measuring inspirational leadership, a cluster also identified among 19 categories by Yukl (1981). He thought this was important as he believed that "a leader could move followers toward common goals, provide meaning, and generate acceptance of missions without necessarily being charismatic. One need not identify with leaders to be aroused by them about the importance of an effort" (Bass, 1995, p. 471). The factor scores of the 176 officers were then intercorrelated and subjected to a higher order factor analysis. Two factors emerged: an active-proactive factor and a passive-reactive factor. Bass (1985) concluded that transformational leadership is composed of three active dimensions, transactional leadership of one active (CR) and one passive (MbE) factor. Furthermore, the passive dimension correlated .88 with a cluster of additional LF items.

> Reputation for charisma, individualized consideration, intellectual stimulation, and contingent reward involve proactive foresight, planning ahead, and taking steps when necessary in anticipation of perceived opportunities and threats. On the other hand, maintaining discipline or managing-by-objectives involves more of a 'wait-and-see' policy which at its extreme becomes laissez-faire avoidance of being drawn into the situation or taking initiatives or responsibility for it. (Bass, 1985, p. 215)

Bass points out that active-proactive leadership is not the opposite to passive-reactive leadership, as some leaders display both, whereas others display none, and still others are high on the one and low on the other. Further analysis compared the leadership style of 40 combat officers with 35 support officers. A multivariate analysis of variance (MANOVA) showed that combat officers exhibit significantly more transformational leadership and CR, whereas no significant differences were found for the MbE-dimension (Castro, 1998).

In addition to the leadership items, Bass (1985) also included two satisfaction items, three items measuring followers extra effort beyond expectations, and four items for the perceived effectiveness of the leader into the MLQ.

MLQ versions

Already in the publication where the MLQ was first introduced, Bass (1985) reports on a number of additional versions of the MLQ. In one study "a small sample of 11 technical superiors of a large medical equipment manufacturer completed a shorter Form 2 containing 31 of the 73 items" (p. 220). Unfortunately, no additional information was provided regarding the measure. In another study, 198 undergraduates completed Form 4. "On this form, ten items, many newly written, were included for each of our five factors" (p. 220). 23 New Zealand educational administrators "completed a somewhat modified questionnaire. Absent were the question about a specific critical incident and two management-by-exception items" (p. 225). In yet another study, 256 managers "completed a shorter version of 37 items of the five scales" (p. 225). Once again, no additional information concerning the composition of the questionnaire was provided.

Hence, in Bass' first publication on transformational leadership and its measurement, already five different versions of the MLQ were reported. Over the time, the questionnaire *developed*, research results and theoretical criticism led to some changes. MbE, for example, was divided into an active and a passive scale, charisma into IIA and IIB, IM was built into a scale of its own. Multiple forms of the MLQ other than the ones reported in Bass first publication have been used in research since.

MLQ Form 5 and the revised Form MLQ 5R have also been used for empirical research on transformational leadership. Usually Bass (1985) is cited as the source for both these measures. These versions comprise three transformational dimensions (charisma, IC, and IS) and two transactional scales (CR and MbE), each measured by ten items (Bass & Avolio, 1989a; Seltzer & Bass, 1990). However, confusion arises, as Hater and Bass (Hater & Bass, 1988) describe the MLQ 5 as containing "70 items of behavior" (p. 697), and Avolio (1994) states that the MLQ 5R contains, in addition to the aforementioned transformational scales, an IM subscale with seven items. Version 5X of the MLQ (Bass & Avolio, 1991) consists of five transformational scales (IIA – 8

items, IIB - 10, IM - 10, IS - 10, and IC - 9), three transactional dimensions (CR – 9 items, MbEa - 7, and MbEp - 7) and LF (measured by 8 items), therefore 78 items altogether (Castro, 1998). This version was developed based on the results of previous research using earlier versions and the expert judgment of six leadership scholars who recommended additions or deletions of items (Antonakis, Avolio, & Sivasubramaniam, 2003). Later on, a short version of the MLQ 5X (Bass & Avolio, 1995a) was presented that measures the above mentioned nine MLQ scales with four items each. The MLQ 11R and 11S (Bass, 1987; also labeled MOQ 11R and 11S, Atwater & Yammarino, 1994) are revised versions adapted to military settings that measure nine scales (charisma, IC, IS, and IM – each measured with six items, contingent reward and contingent promises – each measured with 3 items, MbEa and MbEp – each measured with 4 items, and LF – measured with 6 items) in one version that assesses subordinates' perceptions of the leader and one self version. Furthermore, a 40-item measure exists to assess eight dimensions of leadership (charisma, IS, IC, IM, CR, MbEa, MbEp, and LF), the version MLQ Form 8Y (Bass & Avolio, 1993b). Finally, Howell and Avolio (1993) report a Form 10 that only measures leadership behaviors, as former versions of the MLQ (e.g. 5R) were criticized for mixing the measurement of leadership behaviors and its effects (Hunt, 1991). According to Howell and Avolio (1993), Form 10 comprises three transformational scales (charisma, IS, and IC) and three transactional scales (CR, MbEa, and MbEp).

Furthermore, several ad hoc versions (Castro, 1998) that use various item-selections of the MLQ versions have been employed in studies. Tepper and Percy (1994), for example, use a 24-item version of the 72-item version of Form 10 (Bass & Avolio, 1990a). Item selection criteria were: "(a) the content of the items was consistent with the definitions presented earlier, (b) the items served as measures of leadership behavior rather than outcomes of leadership, and (c) the items had been shown to be good indicators in previous research" (Tepper & Percy, 1994, p. 737). According to their description, Form 10 measures four transformational dimensions (charisma, IM, IC, and IS) and four dimensions of transactional leadership (contingent promises, contingent reward, MbEa, and MbEp). Atwater and Wright (1996) draw 28 items from Form 10 to measure seven leadership dimensions with four items each (charisma, IC, IS, IM, CR, MbEa, and MbEp). Bass and Avolio (1989a) used 40 items drawn from Form 5, measuring five scales (charisma, IC, IS, CR and MbE) with eight items each. The

respective items were selected as they were "the most internally consistent of the ten items on each of the scales" (p. 515). Not only just shortened, but longer versions of the MLQ exist as well. Comer, Jolson, Dubinsky, and Yammarino (1995) used a 57-item version in their study that measures charisma, IS, and IC (each with 10 items), IM (7 items), CR, and MbE (10 items each). Apparently this measure is based on the MLQ Form 5 (that usually consists of 50 items and does not measure IM; (Bass & Avolio, 1989). In another study, Dubinsky, Yammarino, Jolson, and Spangler (1995) also used a 57-item version based on Form 5 of the MLQ. However, in this questionnaire, transformational leadership was assessed with 37 items, transactional leadership with ten items, and LF leadership with another ten items. Based on Form 8Y, Yammarino and Dubinsky (1994) measured transformational and transactional leadership with a 47-item version, assessing charisma, IC, IS, and CR with 10 items each, and IM with 7 items. Hackman, Furniss, Hills, and Paterson (1992) used a 79 items to measure charisma, IS, IC, IM, CR, MbEa, MbEp, and extra effort. As already mentioned, the MLQ measures, in addition to the leadership scales, three criteria of leadership success: extra effort (EEF, measured with 3 items), effectiveness (EFF, 4 items), and satisfaction (SAT, 2 items). The EEF scale measures if a person is willing to work and be successful – more than he/she expected to. The other two scales refer to the satisfaction with and the effectiveness of the leader. (For an overview over the existing versions with their number of leadership items and the leadership scales they aim to measure see Table 05).

Table 05. Summary of the different MLQ versions

Source	MLQ version	Based on version	Number of items	Charisma	IIA	IIB	IM	IS	IC	CR	Contingent Promises	MbE	MbEa	MbEp	LF
Bass (1985)	1		73	x				x	x	x		x			
Bass (1985)	2		31												
Bass (1985)	4		50	x				x	x	x		x			
Bass (1985)			37	x				x	x	x		x			
Bass & Avolio (1989)	5		50	x				x	x	x		x			

Table 05 continued

Source	MLQ version	Based on version	Number of items	Charisma	IIA	IIB	IM	IS	IC	CR	Contingent Promises	MbE	MbEa	MbEp	LF
Hater & Bass (1988)	5		70	x				x	x	x		x			
Bass (1985)	5r		50	x				x	x	x		x			
Avolio (1994)	5r		57	x			x	x	x	x		x			
Bass & Avolio (1991)	5x		78		x	x	x	x	x	x			x	x	x
Bass & Avolio (1995)	5X sho		36		x	x	x	x	x	x			x	x	x
Bass & Yammarino (1987)	11R		44	x			x	x	x	x	x		x	x	x
Bass & Yammarino (1987)	11S		44	x			x	x	x	x	x		x	x	x
Bass & Avolio (1993)	8Y		40	x			x	x	x	x			x	x	x
Bass & Avolio (1990)	10		72	x				x	x	x			x	x	
Tepper & Percy (1994)		10	24	x			x	x	x	x	x		x	x	
Atwater & Wright (1996)		10	28	x			x	x	x	x			x	x	
Bass & Avolio (1989a)		5	40	x				x	x	x		x			
Comer et al. (1995)		5	57	x			x	x	x	x		x			
Yammarino & Dubinsky (1994)		8Y	47	x			x	x	x	x					
Hackman et al. (1992)			76	x			x	x	x	x			x	x	

Notes: IIA = idealized influence attributed, IIB = idealized influence behavior, IM = inspirational motivation, IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward, MbE = management by exception, MbEa = management by exception active, MbEp = management by exception passive, LF = laissez-faire.

In addition to the different versions of the MLQ that are reported here, a number of translated versions exist. Translations are available in Italian, Spanish, French, German, Dutch, Norwegian, Hebrew, Chinese, Arabic, Japanese, Korean, and Indonesian (Bass & Avolio, 1997). These translations, however, refer to varying American versions, hence, not perforce to the latest one (the MLQ 5X).

2.3.2. Factorial Validation

As already mentioned, correlational and factorial analyses suggested a two-factor higher order structure for Form 1 of the MLQ (Bass, 1985), with one active-proactive factor that contained the transformational scales and CR, and one passive-reactive factor, that was mainly made up of MbE. Until now, the high correlations among the transformational scales are often addressed in the literature – correlations between .41 and .90 are reported (Avolio, Bass, & Jung, 1999; Bycio, Hackett, & Allen, 1995; DenHartog et al., 1997; Howell & Avolio, 1993; Lievens, Van Geit, & Coetsier, 1997; Vandenberghe, Stordeur, & D'hoore, 2002). In a meta-analysis, Lowe, Kroeck, and Sivasubramaniam (1996) report correlations between r = .85 and r = .68 for the transformational scales (see Table 06). Therefore, the four I's of transformational leadership (Bass & Avolio, 1994) can not be confirmed as four independent scales (Awamleh & Gardner, 1999; Carless, 1998; Tracey & Hinkin, 1998). CR shows as high correlations with the transformational scales as these display amongst each other (Tejeda, Scandura, & Pillai, 2001; Vandenberghe et al., 2002). Furthermore, the theoretical criticism by Yukl (1999b) that it is unclear why MbEp is counted as transactional scale is confirmed by empirical findings as MbEp shows high positive correlations with LF (Bass & Avolio, 1995a).

Several analyses have been conducted to investigate the MLQ factor structure proposed by Bass (1985). Moreover, confronted with these unsatisfying correlational findings, several authors have attempted to investigate alternative factor models. These will be the focus of the following section.

Table 06. Correlations of the MLQ scales reported by Lowe et al. (Lowe et al., 1996, p. 421)

Scales	**1.**	**2.**	**3.**	**4.**
1. Charisma				
2. Intellectual stimulation	.82			
3. Individualized consideration	.85	.68		
4. Contingent reward	.70	.70	.63	
5. Management by exception	.10	.05	.09	.21

A follow-up study conducted by Hater and Bass (1988) with a 70 item version of the MLQ did not advise a revision of the proposed structure. Their principal components analysis (with varimax rotation) revealed factors similar to the five factors proposed by Bass (1985), but also yielded a sixth factor "that indicated the need to differentiate active from passive Management-by-Exception" (Hater & Bass, 1988, p. 697). Howell and Avolio (1993) also interpreted their results as a confirmation of Bass and Avolio's (1990a) factorial structure, as in a partial least squares (PLS) analysis "all MLQ items had factor leadings on their respective constructs that were greater than .7" (Howell & Avolio, 1993, p. 896). However, one item of each of the following scales failed to reach the criterion of a factor loading greater than .7: IS, IC, MbEa, and MbEp.

Bycio et al. (1995) also tried to factorially validate the MLQ 1. They used a nested analysis to compare several competitive hypothetical and empirical models. The authors compare the five-factor model with three alternative models. In the interest of parsimony, they began with the simplest model using one general factor. The other two models are two-factor models. One compares two theoretically derived factors, a transformational factor (charisma, IC, and IS), and a transactional factor (CR and MbE). "This model implies support for the basic distinction between the two forms of leadership but not for their specific components" (p. 469). The other model, with more empirical relevance, compares the active-proactive factor reported by Bass (1985), including charisma, IC, IS and CR, with the passive-reactive factor (MbE). Support for the active-passive model, besides the initial study of Bass (1985), comes from two studies by Waldman, Bass, and Einstein (1987), as well as Avolio, Waldman, and Einstein (1988). Bycio et al. (1995) use a 40 item version of the MLQ (27 transformational and 13 transactional items). The results of the confirmatory factor analyses (CFAs) show that "as one progresses from the most restricted model (one general factor) to the least restricted model (five correlated factors), the indices generally exhibit incremental improvements in overall fit" (p. 471, see also Table 07). The increase of the χ^2 values is not surprising as less restricted models gain better fit per definition. However, even the parameters that control for increases in the number of parameters (adjusted goodness-of-fit index – *AGFI*, parsimonious fit index – *PFI*; Bycio et al., 1995) show increase in the fit values. All in all, the fit indices do not reach the criteria for a good fit. For example, the comparative-fit index (*CFI*; Bentler, 1990), the

goodness-of-fit index (*GFI*; Jöreskog & Sörbom, 1998), the non-normed fit index (*NNFI*; also labelled Tucker-Lewis-index; Bollen, 1989; Byrne, 2001), and the *AGFI* should be greater than .90 Bentler, 1990; Bentler & Bonett, 1980). Those parameters satisfy the recommendations mentioned in the literature (Kline, 1998; Medsker, Williams, & Holahan, 1994; Steiger, 1990).

Table 07. Fit-indices of the MLQ factorial models examined by Bycio et al. (1995, p. 472)

Model	χ^2	***df***	***NNFI***	***CFI***	***PFI***	***GFI***	***AGFI***	***RMR***
One general factor	6857.76	740	.84	.84	.79	.73	.70	.09
Two correlated factors (transformational / transactional)	6516.21	739	.84	.85	.79	.75	.72	.09
Two correlated factors (active-proactive / passive-reactive)	6085.21	739	.86	.86	.80	.76	.73	.10
Five correlated factors	4683.07	730	.89	.90	.83	.82	.80	.10

Note: N = 1376. NNFI = non-normed fit index; CFI = comparative fit index; PFI = parsimonious fit index; GFI = goodness-of-fit index; AGFI = adjusted GFI; RMR =root mean square residual.

All models fail to reach satisfying values for all fit-indices. The *NNFI* of the five-factor model, though, is close to .90, the *CFI* meets the criterion of a good fit. However, the alternative two-factor model with the active and the passive factor show a *NNFI* of .86, which "can also be regarded as a reasonable fit, especially because it has somewhat different implications than Bass' (1985) original conceptualization" (Bycio et al., 1995, p. 471). The factor loadings for the five factor model and the active-passive model show high error loadings for the CR and MbE items. The average error variance across all of these items was .66 for the five-factor model and .72 for the two-factor model.

The transformational scales had noticeably lower error components, which averaged .39 for the five-factor and .43 for the two-factor model. The intercorrelations of the five-factor model, however, were very high. The correlations between the transformational scales ranged from $r = .81$ to $r = .91$, the correlations of CR with the transformational scales from $r = .79$ to $r = .83$. Only MbE was easily distinguishable, as it showed only

negative correlations with the other scales. The authors conclude that although the five-factor model showed the better fit-indices, the two-factor model is a better representation of their data.

Garman, Davis-Lenane, and Corrigan (2003) used the MLQ 8Y in their study. They tested the proposed eight-factor structure using CFA procedure. In order to examine alternative models, they performed an exploratory principal components analysis with oblique rotation. A three factor model, although accounting for less variance (58%), showed a cleaner loading pattern than an eight-factor model (explaining 69% of variance). Hence, the three-factor, as well as a four-factor and a five-factor model were also tested using CFA. The fit-indices improved from the three-factor to the eight-factor model (see Table 08).

Table 08. Fit-indices of the MLQ factorial models examined by Garman et al. (2003, p. 808)

Model	χ^2	*df*	*GFI*	*AGFI*	*NNFI*	*CFI*	*RMSEA*	*RMR*
Three factors	4784	557	0.69	0.65	0.82	0.84	0.11	0.062
transformational, transactional, MbE								
Four factors	4774	554	0.70	0.65	0.82	0.84	0.11	0.061
transformational, CR, MbE, LF								
Five factors	4370	550	0.71	0.67	0.83	0.85	0.11	0.044
transformational, CR, MbEa, MbEp, LF								
Eight factors	3678	532	0.75	0.70	0.85	0.87	0.098	0.043
II, IM, IS, IC, CR; MbEa, MbEp, LF								

Note: N = 623. II = idealized influence, IM = inspirational motivation, IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward, MbE = management by exception, MbEa = MbE active, MbEp = MbE passive, LF = laissez-faire; GFI = goodness-of-fit index; AGFI = adjusted GFI; CFI = comparative fit index; NNFI = non-normed fit index; RMSEA = root mean square error of approximation; RMR =root mean square residual.

Unfortunately, no information is given if the factors were correlated or not. As the exploratory model was performed with oblique rotation, one can assume that correlations of the factors were allowed.

> Given the complexity of the model and the fit relative to the other tested factor structures…, these fit statistics appear reasonable (e.g. see Brown & Leigh, 1996) and provide support for the eight-factor structure, with distinct active and passive management-by-exception factors, as providing the best fit for the data. (Garman et al., 2003, pp. 807/808)

According to the authors, the five-factor model also demonstrated a reasonable fit, providing more support for a distinction of the MbE active and passive facets.

In the manual of the MLQ 5X, Short, Bass and Avolio (1995a) also examined the factorial structure of the instrument using CFA and compared it to alternative, conceptually plausible models. Four different models were tested: a model with one general factor, a model with two correlated factors (active and passive leadership), a model with three correlated factors (transformational, transactional, and LF), and a model with nine correlated factors (IIA, IIB, IM, IS, IC, CR, MbEa, MbEp, and LF). The fit-indices of the models increased from the one-factor to the nine-factor model (see Table 09). Only the nine-factor model reaches the criteria for a good fit.

Table 09. Fit-indices of the MLQ factorial models examined by Bass and Avolio (1995, p. 25)

Model	***χ²***	***df***	***GFI***	***AGFI***	***RMR***
One factor	5647	594	0.75	0.72	0.07
Two correlated factors	5260	593	0.77	0.74	0.08
active - passive					
Three correlated factors	3529	591	0.86	0.84	0.05
transformational – transactional - LF					
Nine correlated factors	2394	558	0.91	0.89	0.04
IIA, IIB, IM, IS, IC, CR, MbEa, MbEp, and LF					

Note: N = 2080; GFI = goodness-of-fit index, AGFI = adjusted GFI, RMR = root mean square residual; IIA = idealized influence attributed, IIB = idealized influence behavior; IM = inspirational motivation, IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward, MbEa = management by exception active, MbEp = management by exception passive, LF = laissez-faire.

The re-examination of the components of transformational leadership by Avolio et al. (1999) was performed to examine the initial six-factor model (Bass, 1985) with the MLQ 5X, and to see if the questionnaire still examines what it was designed for. Those facets were: charisma/inspiration (now measured with the combined indicators of IIA, IIB, and IM), IS, IC, CR, MbEa, and one passive-avoidant factor (the combination of MbEp and LF).

The passive-avoidant factor is built due to the high correlations of MbEp and LF and was entered in the analyses to satisfy the initial intention of including a non-leadership factor into the model. Alternatively, seven other models are tested (see Table 10).

Table 10. MLQ factorial models tested using CFA by Avolio et al. (1999)

Model	**Scales**
One general factor	
Two correlated factors (active vs. passive)	active: transformational, CR, and MbEa
	passive: MbEp and LF
Two correlated factors (active constructive vs. passive corrective)	active constructive: transformational and CR
	passive corrective: MbE and LF
Three correlated factors	transformational
	transactional: CR and MbEa
	passive-avoidant: MbEp and LF
Four correlated factors	transformational vs. CR vs. MbEa vs. passive-avoidant
Five correlated factors	LF vs. CR vs. MbEa vs. MbEp vs. transformational
Six correlated factors	charisma/inspiration, IS, IC, CR, MbEa, and passive-avoidant
Seven correlated factors	charisma/inspiration, IS, IC, CR, MbEa, MbEp, and LF

Note: IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward, MbE = management by exception, MbEa = MbE active, MbEp = MbE passive, LF = laissez-faire.

The models were tested using CFA. Altogether, 14 samples from separate organizations form the whole sample. Nine of these samples were used to test the six-factor model, which did not produce an adequate fit due to the high intercorrelations of the transformational scales and their correlations with CR (χ^2 = 13378, *df* = 2889; *GFI* = .73, *RMR* = .10). Based on the modification indices obtained for this model, Avolio et al. (1999) eliminated items that had high cross-loadings on other factors and/or did not load on the intended factor. 44 items were deleted, and therefore a 36 item measure resulted. The six-factor model was then re-run with the nine sub-samples. Additionally, the seven alternative models were tested with this sub-sample as well. As with the aforementioned results, the fit increased with the number of factors in the model (see Table 11).

Table 11. Fit-indices of the MLQ factorial models examined by Avolio et al. (1999, p. 451)

Model	χ^2	*df*	*GFI*	*AGFI*	*RMR*	*NFI*	*NNFI*
One general factor	5674	594	.75	.72	.07	.80	.79
	(6895)		(.67)	(.63)	(09)	(.75)	(.73)
Two correlated factors (active vs. passive)	3509	593	.86	.84	.05	.87	.87
	(3676)		(.85)	(.84)	(.06)	(.87)	(.73)
Two correlated factors (active constructive vs.	5260	593	.77	.74	.08	.81	.80
passive corrective)	(5509)		(.77)	(.75)	(.11)	(.80)	(.79)
Three correlated factors (transformational vs.	3528	591	.86	.84	.05	.87	.87
transactional vs. passive-avoidant)	(4229)		(.82)	(.80)	(.07)	(.85)	(.83)
Four correlated factors (transformational vs.	2907	588	.89	.87	.04	.90	.89
CR vs. MbEa vs. passive-avoidant)	(3188)		(.88)	(.86)	(.06)	(.88)	(.87)
Five correlated factors (LF vs. CR vs. MbEa vs.	2790	584	.89	.87	.04	.90	.88
MbEp vs. transformational)	(3178)		(.88)	(.86)	(.06)	(.88)	(.87)
Six correlated factors (charisma/inspiration, IS,	2509	579	.91	.90	.04	.91	.89
IC, CR, MbEa, and passive-avoidant)	(2788)		(.91)	(.89)	(.05)	(.90)	(.88)
Seven correlated factors (charisma/inspiration,	2497	573	.90	.90	.04	.91	.89
IS, IC, CR, MbEa, MbEp, and LF)	(2769)		(.91)	(.89)	(.05)	(.90)	(.88)

N = 2080 (1706), fit-indices for the second sample are given in brackets; GFI = goodness-of-fit index, AGFI = adjusted GFI, RMR = root mean square residual, NFI = normed fit index, NNFI = non-normed fit index; IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward, MbE = management by exception, MbEa = MbE active, MbEp = MbE passive, LF = laissez-faire.

Only the six- and the seven-factor model reached the criteria for a good fit. The re-examination of the models with the second sample shows comparable values, with only slight deterioration of fit within the six-factor and the seven-factor model.

Table 12. Reliabilities and correlations of the scales of the six-factor model (Avolio et al., 1999, p. 453)

Scales	1.	2.	3.	4.	5.	6.
1. Charisma	**.92 (.92)**					
2. Intellectual Stimulation	.82 (.81)	**.83 (.78)**				
3. Individualized Consideration	.81 (.82)	.74 (.77)	**.79 (.78)**			
4. Contingent Reward	.77 (.71)	.73 (.67)	.75 (.68)	**.80 (.74)**		
5. Management by exception active	-.17 (-.16)	-.09 (-.08)	-.23 (-.21)	-.11 (.02)	**.63 (.64)**	
6. Passive-avoidant	-.51 (-.54)	-.46 (-.44)	-.45 (-.52)	-.38 (-.28)	.24 (.45)	**.84 (.86)**

N = 1394 (1498), values for the second sample are given in brackets.

Despite the good fit of the six-factor and the seven-factor model, the problem with the lack of discriminant validity is still existent. The latent correlations of the transformational factors and with CR are very high (see Table 12), which can be taken as an indication for a higher-order factor structure.

In order to identify possible higher-order factors, three post hoc models were tested by the authors: 1) Two uncorrelated higher-order factors designated as active constructive (charisma/inspiration, IS, IC, and CR) and passive corrective (MbE and LF), 2) three uncorrelated higher-order factors designated as transformational (charisma/inspiration and IS), developmental/transactional (IC and CR – therefore psychological and material rewarding), and passive corrective (MbE and LF), and 3) two correlated higher-order factors designated as transformational and developmental/transactional and one uncorrelated passive corrective factor. *GFI* and *T* were reported to indicate the fit of the higher-order models. *T* refers to Marsh and Hocevar's (1985) target coefficient that represents the ratio between the χ^2 value of the first-order model and the χ^2 value of the higher-order model. *T* values close to 1 indicate that the higher-order model is more

parsimonious than the first-order model. For all three higher-order models, the *GFI* for the first sample reached .89 (model 1 and 2: *GFI* = .87, model 3: *GFI* = .89 for the second sample) and therefore resembled the six-factor model. The target coefficient was *T* = .90 (.87) and *T* = .92 (.87) for the first and second model. Only the third model exceeded the minimum cut-off for *T* (.90, Marsh & Hocevar, 1985) for both samples with *T* = .93 (.91). The correlations among the higher-order factors were *r* = .39 (*r* = .33) for transformational with developmental/transactional, *r* = -.73 (*r* = -.48) for transformational with passive-avoidant, and *r* = -.03 (*r* = .09) for developmental/transactional with passive-avoidant. Therefore "the best fitting hierarchical model with evidence of discriminant validity was Model 3" (Avolio et al., 1999, p. 455). Taking the results, the authors concluded that the six-factor model holds the best fit-indices, however lacking of discriminant validity. A higher-order factor model with two correlated factors of transformational and transactional leadership and one uncorrelated passive-avoidant factor reduced the latent correlations and therefore enhanced the discriminant validity. Bass, Avolio, Jung, and Berson (2003) re-examined the six-factor model suggested by Avolio et al. (1999), and found acceptable fit-indices (initial sample of 18 platoons: *GFI* = .90, *AGFI* = .87, *NFI* = .90, *RMR* = .04; target sample of 72 platoons: *GFI* = .93, *AGFI* = .91, *NFI* = .94, *RMR* = .004). As the reliability of the MbEa scale was below acceptable standards (α = .56), which can also be seen in the results obtained by Avolio et al., this scale was eliminated.

Recently, Tejada et al. (2001) replicated the proposed structure of the MLQ 5X with a reduced set of items. Taking the initial set of items as a starting point, the proposed scales showed acceptable values for the internal consistency in their four samples, with the exception of MbEa, that did not reach the criterion of .70 proposed by Nunnally (1978) in one sample. The correlation analysis of the scales, however, showed highly intercorrelated transformational scales (the bigger part of correlations being greater than *r* = .80; which is interpreted as support for the convergent validity of the construct by the authors), high correlations between the transformational scales and CR (ranging from *r* = .51 to *r* = .75), and negative correlations of the transformational scales with MbEp and LF (ranging from *r* = -.38 to *r* = -.77; being interpreted as support for discriminant validity). MbEp and LF were highly positively correlated. The CFAs for the proposed first-order model (with nine scales) did not reach the criteria for a good fit (the best values were obtained for sample 1: *CFI* = .73, *NNFI* = .72, *RMR* = .15).

Examination of the proposed higher-order factors of transformational and transactional leadership only provided support for one of the four samples (sample 3: *CFI* = .95, *NNFI* = .92, *RMR* = .04; sample 1: *CFI* = .82, *NNFI* = .71, *RMR* = .14). As the model fit can be affected by a large number of items or factors, Tejada et al. (2001) turned their interest to reducing the number of items. "Items that had the highest, corrected for unreliability, item-to-subscale correlation were … retained into three-item subscales" (p. 44).

The CFAs for the reduced set of items showed a substantial improvement for the fit-indices for the first-order and higher-order models (see Table 13, note that sample 1 was used for item-selection).

Table 13. Fit-indices of the MLQ models examined by Tejada et al. (2001, p. 44), reduced set of items

	First-order model			**Higher-order model**		
	CFI	**NNFI**	**RMR**	**CFI**	**NNFI**	**RMR**
Sample 1 (N = 384)	.92	.91	.05	.96	.94	.06
Sample 2 (N = 398)	.91	.89	.06	.95	.93	.05
Sample 3 (N = 486)	.86	.83	.05	.94	.92	.08
Sample 4 (N = 199)	.90	.88	.07	.95	.92	.08

Note: CFI = comparative fit index; NNFI = non-normed fit index; RMR =root mean square residual.

Two of the three cross-validation samples met the criterion for the *CFI*, however, did not meet the criterion for the *NNFI* (both .90), but were below .10 for the *RMR* (criteria were a priori defined by the authors). However, the authors conclude that "it was possible to create a reduced-item set that supported the MLQ's hypothesized structure" (p. 47). This was supported, though, by regression analyses with three outcome variables, showing that the excluded items only accounted for little additional variance in comparison to the three-item scales.

On the other hand, strong support was provided for the higher-order structure of the MLQ. In all samples, the criteria for a good fit were met. No support was found for the four-item per scale version proposed by Avolio et al. (1999, see above). The *CFI* and

the *NNFI* were generally below the conventional minima (sample 1: *CFI* = .87, *NNFI* = .85, *RMR* = .11; sample 2: *CFI* = .83, *NNFI* = .81, *RMR* = .13; sample 3: *CFI* = .85, *NNFI* = .83, *RMR* = .08; sample 4: *CFI* = .79, *NNFI* = .76, *RMR* = .09).

Antonakis et al. (2003) examined the structure of the MLQ 5X short within homogenous contexts, arguing that the measurement of leadership is context-specific. They follow Bass' (1997) argumentation that "universal does not imply constancy of means, variances, and correlations across all situations but rather explanatory constructs good for all situations" (p. 130). Behaviors A and B can be very useful in one context, and therefore be frequently displayed, whereas within another context, behavior B is not productive, and therefore less frequently displayed. "Even though it is possible that a certain range of leadership behaviors can be reliably measured across different contexts, the range of leadership behaviors of interest may very well correlate differently depending on context" (Antonakis et al., 2003, p. 269). This argumentation, however, is in contrast to the argumentation of Avolio et al. (1999), who saw the heterogeneity of their samples as one of the important factors.

> An equally important objective for the current study was to provide results that would have greater generalizability than earlier research, which used samples that were either much smaller or highly homogeneous with respect to personal characteristics … and organizational characteristics. … By broadening the sample base, a better test can be provided of the multifactor leadership model, while also enhancing the generalizability of the current findings. (p. 458)

And, finally "it is expected that as one approximates the broader population of potential raters evaluating their leaders, it should be possible to provide finer distinctions among the factors comprising the multifactor model of leadership" (pp. 458/459). In their study, Antonakis et al. (2003) examine three context factors: environmental risk, leader hierarchical level, and leader-follower gender. Other authors, for example Antonakis et al., have also examined several competing first-order models in accordance with Hoyle and Panter (1995). They have suggested that the target model should be compared with "one ore more previously specified competing models indicated by other theoretical positions, contradictions in the research literature, or parsimony" (p. 130). Hence, nine different models were tested: 1) a model with one general factor, 2) a model with two

correlated factors (active – transformational, CR, and MbEa vs. passive – MbEp and LF), 3) a model with three correlated factors (transformational, transactional, and LF), 4) another model with three correlated factors (transformational, transactional, and passive), 5) a model with six correlated factors (charisma – IIA, IIB, and IM – IS, IC, CR, MbEa, and passive), 6) a model with seven correlated factors (charisma, IS; IC, CR, MbEa, MbEp, and LF), 7) a model with eight correlated factors (II, IM, IS, IC, CR, MbEa, MbEp, LF), 8) another model with eight correlated factors (IIA, IIB, IM, IS, IC, CR, MbEa, and passive), and 9) a model with the nine proposed correlated factors. The first part of their study tested the differences in the factor structure of male and female leaders. In the pooled sample, the nine-factor model showed the best fit (see Table 14).

The fit indices improved when the authors tested the female and male rater samples separately, whereby the leader and follower gender in the samples was the same (fit for the nine-factor model: χ^2 = 6047.39, *df* = 1116, χ^2/df = 5.42, *CFI* = .901, *RMSEA* = .036).

Table 14. Fit-indices of the MLQ factorial models examined by Antonakis et al. (2003, p. 287)

Model	χ^2	*df*	χ^2/df	*CFI*	*RMSEA*
Pooled data (N = 3368)					
Null model	50360.45	630			
Model 1: one factor	14947.60	595	25.12	.711	.085
Model 2: two factors	11865.93	594	19.98	.773	.075
Model 3: three factors	12930.97	591	21.88	.752	.079
Model 4: three factors	10722.73	591	18.14	.796	.071
Model 5: six factors	6767.46	579	11.69	.876	.056
Model 6: seven factors	6482.60	573	11.31	.881	.055
Model 7: eight factors	5965.54	566	10.54	.891	.053
Model 8: eight factors	5622.47	566	9.93	.898	.052
Model 9: nine factors	5306.32	558	9.51	.905	.050

Note: CFI = comparative fit index, RMSEA = root mean square error of approximation, for a detailed description of the models see text.

In a second study with different samples, the multisample CFA for the nine-factor model did not represent the data very well (the authors provide no fit-indices for that model). Within the different contextual situations, however, the nine-factor model consistently represented the data best (for the fit-indices of the nine-factorial model in a variety of contexts see Table 15).

In addition to the examination of the full MLQ models, some studies only used a subset of the MLQ items or factors. Waldman, Bass, and Yammarino (1990), for example, only used the charisma and CR items. In order to determine the validity of using CR and charisma as common dimensions, they used principle factor analysis. Their results show that the items were loading highly on their indented factors, except for one CR item that only showed a loading of .51. The two factors accounted for 69% of the variance and were highly correlated (r = .74). Waldmann et al. took the results as being confirmation of the proposed structure.

Table 15. Fit-indices for the nine-factor model in several contextual conditions (Antonakis et al., 2003)

Model	***N***	***χ²***	***df***	***χ²/df***	***CFI***	***RMSEA***
High risk (military platoon, fire departments)	502	75.24	36	2.09	.991	.047
Stable business (various business firms)	1240	473.27	108	4.38	.963	.052
Majority males (military platoon, gas exploration, fire departments, military recruiting unit)	906	485.74	108	4.50	.957	.062
Majority females (nurse educators, nurse educator executives)	481	69.89	36	1.94	.984	.044
Low-level leaders (military platoon, gas exploration, perioperative nurses, hospitality/retail)	1887	479.77	72	6.66	.959	.067

Note: CFI = comparative fit index; RMSEA = root mean square error of approximation.

Apart from studies that are interpreted as showing support for the proposed model, a lot of studies did not, or only in parts, confirm the particular factor structure. Tepper and Percy (1994) tested a series of rival factor models using CFAs with a 24 item version of the MLQ 10: a null model in which all items loaded on separate factors, a model with one general factor, a model with two correlated factors of transformational and transactional leadership each measured by 12 items, and a model with eight correlated factors (charisma, IM, IS, IC, CR, contingent promises, MbEa, and MbEp). The results show that none of the models obtained a good fit to the data (see Table 16).

As the six MbE items, one charisma, and one IM item showed large standard errors, Tepper and Percy reanalyzed their data with the remaining 16 items. The one-factor and the two-factor models still had poor fit-indices. The five-factor model (with charisma, IM, IS, IC, and CR – the reward and promises scale were combined) showed a good fit to the data ($\chi^2 = 210.95$, $df = 94$; $GFI = .92$, $NFI = .90$, $NNFI = .93$).

Table 16. Fit-indices of the MLQ factorial models examined by Tepper and Percy (1994, p. 739) , 24 item version

Model	χ^2	***df***	***GFI***	***NFI***	***NNFI***
Null model	2994.16	276	.28		
One general factor	655.39	252	.83	.78	.84
Two correlated factors transformational – transactional	628.54	251	.84	.79	.85
Eight correlated factors charisma, IM, IS, IC, CR, contingent promises, MbEa, and MbEp	465.11	224	.88	.84	.89

Note: N = 290. GFI = goodness-of-fit index; NFI = normed fit index; NNFI = non-normed fit index; IM = inspirational motivation, IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward, MbEa = management by exception active, MbEp = management by exception passive.

However, "the disattenuated correlation between the latent charismatic leadership and inspirational leadership traits was .95, suggesting that they captured the same latent construct" (Tepper & Percy, 1994, p. 739). Hence, a four-factor model was tested, with those two scales combined to one factor. The fit-indices of the four-factor model were

also satisfying (χ^2 = 231.29, *df* = 98; *GFI* = .91, *NFI* = .89, *NNFI* = .92) and comparable to those of the less parsimonious five-factor model. The authors concluded that first, the MbE scales needed extensive refinement, as none of the models containing their items showed an adequate fit. Second, CR and contingent promises showed good convergence, and can therefore form one scale. And third, charisma and IM failed to show convincing evidence of discriminant validity. Furthermore, as the four-factor model, where these items loaded on one single factor, showed adequate fit-indices, it can be assumed that these two scales capture a single latent construct. A second part of Tepper and Percy's (1994) study that only examined charisma, IM and CR, provided further support for their combination into one latent construct. Although the two-factor (transformational – transactional) and the three-factor (charisma, IM, and CR) model obtained fit indices that exceeded the criteria for a good fit, the pattern and magnitude of the factor-loadings suggested that charisma and IM converge into one dimension of leadership.

The high intercorrelations of the transformational scales and the high correlation of MbEp and LF lead Lievens et al. (1997) to a re-examination of the factor structure of the MLQ 8Y (in their study the average correlation between the transformational scales was $\bar{r}$ = .81, between the transactional scales $\bar{r}$ = -.06, MbEp and LF correlated with *r* = .65). An exploratory factor analysis revealed four factors with eigenvalues greater than one. Factor one was labeled transformational leadership and accounted for 38% of the variance, factor two was labeled CR (6%), factor three MbEa (5%), and the last factor was labeled passive leadership (3%), as it contained MbEp and LF items. According to the authors, possible explanations for the high correlations between the transformational scales could be a halo effect, i.e. the subordinates perceive these facets as belonging to the same leadership domain, or that these facets are conceptually closely related, so that it is very difficult to develop behavioral operationalizations which differ significantly from each other.

Another investigation of the factorial structure of the MLQ 8Y by DenHartog et al. (1997) also showed high correlations among the transformational scales and between MbEp and LF. The two transactional scales CR and MbEa correlated only slightly less than they did with the transformational scales. However, CR in this study showed much lower correlations with the transformational scales than in other studies (between *r* = .40 and *r* = .50). Although seven factors had eigenvalues greater than one, only the two,

three, and four-factor solution revealed by principal components analyses had theoretically interpretable factors. The two-factor solution distinguished between active and passive leadership, the four factors between transformational leadership, CR, MbEa and passive leadership. The authors, however, favor the three-factor solution, mostly for theoretical reasons. A transformational, a transactional and a LF factor were interpreted.

Taking the MLQ 10 as a basis, Yammarino, Spangler, and Dubinsky (1998) examined seven different measurement models using CFAs. The first three models were theoretically based on Bass' (1985) theory. Model 1 had five correlated factors: charisma, IM, IS, IC, and CR. Model 2 assumed one general factor, probably representing the subordinate's liking of the superior. Model 3 differentiated between a transformational factor and CR that were allowed to correlate. All three models failed to meet the criteria for a good fit (see Table 17).

Table 17. Fit-indices of the MLQ factorial models examined by Yammarino et al. (1998, p. 38)

Model	**Number of items**	χ^2	***df***	***GFI***	***AGFI***	***NFI***	***NNFI***	***RMR***
Model 1 (charisma, IM, IS, IC, CR)	47	1729.37	1024	.55	.50	.55	.73	.116
Model 2 (one general factor)	47	1794.70	1034	.54	.49	.53	.71	.116
Model 3 (transformational, CR)	47	1788.31	1033	.54	.49	.54	.71	.116
Model 4 (transformational, CR)	27	1017.84	323	.60	.53	.54	.59	.127
Model 5 (transformational, CR)	15	203.27	89	.80	.73	.84	.88	.074
Model 6	10	100.84	34	.85	.76	.89	.90	.077
Model 7	9	67.05	26	.90	.81	.92	.93	.050

N = 111. GFI = goodness-of-fit index; AGFI = adjusted GFI, NFI = normed fit index; NNFI = non-normed fit index, RMR = root mean square residual; IM = inspirational motivation, IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward; for a detailed description of the models see text..

Due to the difficulties with the models that were based on Bass' (1985) theory, Yammarino et al. (1998) sought additional, related theoretical grounding for measurement models. Model 4 was therefore based on the work of House (1977) and

House, Spangler, and Woycke (1991), taking into account that IS and IC do not represent outstanding leadership. Hence, the model comprises the two factors of transformational (without IS and IC) and CR leadership. This model also failed to meet the criteria. Model 5 was derived from Model 4; however, only 15 items were taken into account (criteria for item selection being theoretical reasons and an R^2 greater than .30). Although the fit-indices were nearer to the criteria for a good fit, they still failed to exceed them. Model 6 used ten items from Model 5, but still did not meet the criteria. A large modification index suggested the elimination of one item. Model 7 therefore used nine items to measure the two factors. The fit-indices of this model met the criteria for a good fit. The authors conclude "that 9 items taken from the MLQ provided reliable and valid measures of our two constructs of focus, namely transformational/charismatic and contingent reward leadership" (p. 40). Furthermore, they see their results in line with the two-factor solutions of Yammarino, Spangler, and Bass (1993).

Vandenberghe et al. (2002) measured transformational and transactional leadership with a French version of six scales of the MLQ 5X (Bass & Avolio, 1991). The transformational scales comprised IIA, IS, and IC, transactional leadership comprised CR, MbEa, and MbEp. To examine the factor structure of the questionnaire, Vandenberghe et al. (2002) evaluated the fit of several alternative models using CFA: a model with one general factor, three two-factor solutions (transactional vs. transformational, MbE vs. the remaining scales, and MbEp vs. the remaining scales), a three-factor model (MbEa, MbEp, and the remaining scales), and the six-factor solution. As the assessment of models with large degrees of freedom and sample size may produce unsatisfactory fit (Bagozzi & Heatherton, 1992), Vandenberghe et al. (2002) decided to reduce the number of items by creating three aggregate indicators for each scale. "The practice of averaging items to create 'item composites'…improves the measurement properties of the model, without affecting the comparison process of models of theoretical interest" (p. 20). The models showed increasing fit values from the one-factor to the six-factor model. The fit-indices of the six-factor model (χ^2 = 1013.23, *df* = 120; *GFI* = .90, *NNFI* = .92, *CFI* = .94, *RMR* = .041) were the only ones to exceed the standard of .90 (Medsker et al., 1994) and show a RMR that is below .05. According to the authors, the three factor model also had a reasonable fit (χ^2 = 2204.19, *df* = 132; *GFI* = .78, *NNFI* = .83, *CFI* = .85, *RMR* = .065), given the parsimony of the model. Taking the high intercorrelations of the scales of the six-factor model and the

empirical support for an active leadership construct into account, both the six-factor and the three-factor solutions were of interest. Furthermore, a test recommended by Fornell and Larcker (1981) showed that in the six-factor model the individual transformational scales had more in common with the other transformational scales than with its own indicators. On average they even shared 29% more variance with CR than with their own indicators. This can be taken as further confirmation that the discriminant validity of the transformational scales and CR is problematic. Therefore, two higher-order models were examined: one that subsumed the transformational facets and CR into a higher-order factor and one that subsumed IIA and IS into a transformational as well as IC and CR into a developmental/transactional second-order factor. MbEa and MbEp were not included in the higher-order analyses. The model with one higher-order factor yielded a good fit but was statistically weaker than the baseline model comprising only first-order factors (baseline model: $\chi^2 = 503.66$, $df = 48$; $GFI = .93$, $NNFI = .94$, $CFI = .96$; one higher-order factor: $\Delta\chi^2 = 7.48$, $df = 2$, $p < .05$; $GFI = .92$, $NNFI = .94$, $CFI = .96$, $T = .978$). The model with two higher-order factors did not differ significantly from the baseline model ($\Delta\chi^2 = .75$, $df = 2$, *ns*; $GFI = .93$, $NNFI = .94$, $CFI = .96$, $T = .999$). However, in this model, the correlation of the two higher-order factors was extremely high ($r = .97$), making their distinction very problematic. Thus, a single higher-order factor underlying transformational leadership and CR is more plausible. Altogether, the six-factor model, although having the best fit-indices in the CFA, failed to show satisfying discriminant validity. "The three-factor model including MbEa, MbEp, and active leadership, was found to be a better representation of the data – from a discriminant validity perspective" (Vandenberghe et al., 2002, p. 25). The existence of an active leadership factor is also supported by the correlational and following higher-factor analyses.

In a Norwegian sample a principal components analysis with varimax rotation of the MLQ 5X short yielded three factors (Hetland & Sandal, 2003). The three-factor solution accounted for 78% of the variance. The first factor explained 59% of the variance and covered all the transformational items, as well as CR. The second factor explained 10% of the variance and repeated earlier results concerning a passive-avoidant factor, as it covers LF and MbEp. The third factor explained 9% of the variance and was made up of MbEa items. Furthermore, CR also cross-loaded on this factor.

Another principal components analysis of the MLQ 5X conducted by Wofford, Goodwin, and Whittington (1998) revealed a two-factor solution. In line with the results of Bycio et al. (1995), the transformational scales showed high correlations with CR. The analysis of the second order factor structure therefore showed that the transformational scales and CR loaded on one factor, MbEa and MbEp on the other.

In their examination of transformational leadership, Tracey and Hinkin (1998) performed CFAs for the four transformational scales of the MLQ 5X (II, IM, IS, and IC). The four-factor model, however, was not supported (χ^2 = 1738.37, *df* = 703; *GFI* = .77, *CFI* = .84, *NFI* = .77, *NNFI* = .83, *RMR* = .08). Based on the high correlations of the transformational scales, ranging from *r* = .81 to *r* = .91, a model with one general factor was also tested. The fit-indices of this solution exceeded the criteria for a good fit (χ^2 = 105.47, *df* = 19; *GFI* = .90, *CFI* = .97, *NFI* = .96, *NNFI* = .95, *RMR* = .02), therefore supporting a one-factor model of the transformational scales. This is also in line with previous research by Yammarino and Dubinsky (1994), who likewise used an overall transformational leadership measure due to the high correlations of the transformational dimension and very high loadings of the transformational items on one single factor. In a more detailed analysis of the MLQ 5X, Hinkin and Tracey (1999) conducted a content adequacy assessment based on a procedure suggested by Schriesheim, Powers, Scandura, Gardiner, and Lankau (1993). The results revealed that only 23 of the 39 items that measure transformational leadership were classified according to their designated factor. A CFA of the four-factor model with this reduced set of items yielded no satisfying fit-indices (χ^2 = 532.28, *df* = 224; *GFI* = .76, *CFI* = .86, *NFI* = .78, *NNFI* = .84, *RMR* = .09). The modification indices suggested that ten items should be eliminated from the model. The remaining 13 items represented three factors: IM, IS, and IC. II was completely eliminated. The so-obtained three-factor model was also supported by the CFA results (χ^2 = 159, *df* = 62; *GFI* = .92, *CFI* = .95, *NFI* = .92, *NNFI* = .94, *RMR* = .06). However, it is not astonishing that, after having eliminated all the items suggested by the modification indices, a CFA with the same sample yields a good fit. The correlations of the three factors, however, were still reasonably high (ranging from *r* = .64 to *r* = .85). Hinkin and Tracey also point out that, although the analyses seem to provide some support for the four I's, a close examination of the remaining items reveals a more narrow operationalization of those leadership facets than suggested by Bass. Furthermore, they emphasize the complete lack of

support for II. “The fact that only three of the nine charismatic items survived the content adequacy assessment analysis suggests that there is a lack of conceptual consistency among the items” (p. 114). Furthermore, the remaining items loaded on multiple factors.

Taking the MLQ 5X Short as a basis, Turner, Barling, Epitropaki, Butcher, and Milner (2002) investigated the relationship of transformational leadership and moral reasoning. As the results concerning the optimal factor structure of the MLQ are not consistent, the authors conducted CFAs in order to “establish the most appropriate model of transformational leadership” (Turner et al., 2002, p. 307). Although the nine-factor model had a good fit (χ^2 = 1068, *df* = 521, *CFI* = .97, *RMSEA* = .06), alternative models were tested. A model with three higher order factors (transformational, transactional and passive, i.e. MbEp and LF) also yielded acceptable fit-indices (χ^2 = 1273, *df* = 546, *CFI* = .96, *RMSEA* = .07). However, the solution was problematic as, for example, the transformational and the transactional higher order factors correlated very highly (*r* = .97). Furthermore, the examination of the six-factor model proposed by Avolio et al. (1999, see above) showed good fit-indices (χ^2 = 1312, *df* = 545, *CFI* = .96, *RMSEA* = .07) but once again the higher order model, although having an acceptable fit (χ^2 = 1367, *df* = 551, *CFI* = .95, *RMSEA* = .07), showed high correlations between the higher order factors. Therefore, the authors suggest a new model with three higher order factors (transformational-constructive, i.e. charisma-inspirational, IC, IS and CR; corrective, i.e. MbEa; and avoidant, i.e. MbEp and LF). A CFA provided good fit-indices (χ^2 = 1362, *df* = 551, *CFI* = .95, *RMSEA* = .07 and for a second sample χ^2 = 779, *df* = 551, *CFI* = .88, *RMSEA* = .05), factor loadings indicated no problems. As CR often shows high correlations with the transformational scales (Bycio et al., 1995; DenHartog et al., 1997; Hater & Bass, 1988), the authors see their model justified.

Another exploratory factor analysis of the MLQ subscales produced two factors (Masi & Cooke, 2000), whereby the transformational subscales and CR loaded positively on one and MbEa positively on the other factor. The MbEp subscale showed a moderate positive loading on the MbEa factor (.24) and a high negative loading on the first factor (-.77); LF was not included in the analysis.

Carless (1998) also examined the transformational scales, however without the IM scale. Three alternative models were the center of the investigation of the factorial

structure of the MLQ 5X: one model with a general factor, one model with three factors (charisma, IS, and IC), and one model with the three factors and one higher-order factor. Both three-factor models showed better fit-indices (first-order model: χ^2 = 3317, *df* = 320; *GFI* = .82, *AGFI* = .78, *NNFI* = .89, *RMSEA* = .08, *RMR* = .04; higher-order model: χ^2 = 3317, *df* = 320; *GFI* = .82, *AGFI* = .78, *NNFI* = .89, *RMSEA* = .08, *RMR* = .04) than the model with only one general factor, but did not reach the criteria for a good fit. Due to the high intercorrelations of the three scales, Carless favored the model with one higher-order factor, taking into account that the three facets are conceptually different, but people with high values on one of the scales often also hold high values on the other scales.

Awamleh and Gardner (1999) used four scales of the MLQ 5X short in their study to measure perceptions of charisma and leader effectiveness (IIA, IIB, IM, and EFF). They performed a principal components analysis with varimax rotation for the four scales in order to assess their construct validity. The analysis yielded two factors, one that was composed of leadership items and one EFF item, the other was made up of the three other EFF items and three items that failed to load on the intended leadership scales. Five items also showed high cross-loadings on more than one factor. Thus, this study yielded only partial support for the factorial validity of the MLQ, no support was found for the four-factor model, but instead for a model with a single factor for charisma.

In a study of the United States Air Force Academy, Curphy (1992) investigated the structure of the MLQ and also found support for a single factor for transformational and transactional leadership. Curphy used 16 items of the MLQ, which were presented along with items measuring climate, intent to resign, reward, and punishment. An exploratory analysis revealed that the charisma, IC, IS, and CR items loaded on a single factor.

Koh, Steers, and Terborg (1995) also examined the factor structure of the MLQ. They used the MLQ 5S and refer to Bass (1985) as the source of this version. According to their description, this version comprises 73 items that measure three transformational scales (charisma, IC, and IS), three transactional scales (CR, MbEa, and MbEp), and LF. An exploratory factor analysis with oblique rotation revealed seven factors with eigenvalues greater that one. However, the last two factors were difficult to interpret and therefore excluded from further analyses. The remaining five factors were interpreted as transformational leadership, CR, MbEa, and LF. Hence, the three

transformational facets collapsed into one single factor. The refinement propositions for these scales will be summarized in the following section.

Scale Refinements

Due to the high correlations among the scales of the MLQ and the uncertain factorial structure, some authors focused on the refinement of certain scales. Two of those are the IM and the CR scale.

Inspirational Motivation

If the transformational concept is fragmented, IM is combined by some authors with the II scales to form the original charisma component (cf. Avolio et al., 1999). However, IM is an important facet of the MLQ as it is empirically linked to outcomes such as extra effort or project success (Densten, 2002). In order to examine IM more closely, Densten had a look at the content validity of this scale (Form 5R) by analyzing the wording of each item. Two specific types of wording were examined, following Emrich, Brower, Feldman, and Garland's (2001) suggestion: Image-based wording in the sense of concrete and vivid words versus concept-based wording in the sense of abstract and pallid words. A higher-order CFA with image-based IM and concept-based IM loading on one higher-order factor provided good fit-indices (χ^2 = 39.80, *df* = 11, *GFI* = .98, *CFI* = .98, *RMR* = .04). Furthermore, a structural equation model revealed positive but different relationships of the two IM scales with EEF. The image-based IM scale had twice the loading (β = .64) of the concept-based IM scale (β = .31) on EEF, indicating differential validity for those scales. However, the scales were still highly correlated (*r* = .81).

Contingent Reward

As already mentioned, CR correlates highly with the transformational scales. However, taking a closer look, differences between the correlation patterns for CR and the transformational scales can be detected. In the study of Bycio et al. (1995), CR showed lower correlations with success criteria such as satisfaction, intent to leave, affective and continuance commitment than the transformational scales but higher correlations with

normative commitment. Furthermore, CR correlated positively with MbEa, whereas the transformational scales showed negative correlations with MbEa (Goodwin, Wofford, & Boyd, 2000; Wofford et al., 1998). Taking a look at second-order factor analyses, CR showed high loadings on the transformational factor; however, it was still associated with the transactional facets as well. "Empirically, the association between contingent rewards and transformational behavior appears to be supported, while at the same time, the relationship between contingent rewards and transactional behavior cannot be completely discounted" (Goodwin et al., 2001, p. 761). Therefore, Goodwin, Wofford, and Whittington (2001) suggested splitting the CR scale (comprising nine items) into two sets of items. The authors distinguished items that describe explicit leader behavior related to the negotiation of rewards (example: 'Works out agreements with me on what I will receive if I do what needs to be done') from items that describe implicit expectations for leader behavior associated to the provision of rewards (example: 'Provides his/her assistance in exchange for my effort'). Referring to Rousseau's (1990) theory of psychological contracts, the transactional part of CR is therefore accounted for when "a leader establishes a transaction with a follower in which they negotiate the relationships between performance and rewards" (Goodwin et al., 2001, p.762). Then the psychological contract is based on mutual obligations on the part of leader and subordinate. The followers of the transformational leader, on the other hand, "do not feel the necessity to negotiate a quid pro quo that guarantees rewards for performance, nor are they motivated by these rewards. Rather, their motivation comes from the investment in the vision they share with the leader" (Goodwin et al., 2001, p.762). Hence, central to this implicit contract is their expectation that the leader will provide rewards appropriate to their performance toward vision accomplishment. The conducted CFAs provided support for the distinction of explicit and implicit psychological contracts. Concerning success criteria, transformational leadership (including implicit psychological contracts) showed high positive correlations with organizational citizenship behavior (OCB) and performance measures, whereas transactional leadership (including explicit psychological contracts) correlated negatively with these measures. All in, all the authors concluded that "transformational leaders reward appropriate behavior as do transactional leaders; however, transactional leaders are seen as doing so as a means of carrying out the exchange relationship explicitly established" (Goodwin et al., 2001, p. 771).

2.3.3. Conclusion

"The results from the current and previous research suggest that perhaps Bass and his colleagues have developed a good theory of transformational leadership, but they have not designed a measure that assesses it very well" (Hinkin & Tracey, 1999, p. 112). Although the reliabilities of the MLQ scales usually offer good values, there have been difficulties in replicating the postulated factor structure. Numerous investigations have shown high intercorrelations of the transformational scales and, what is more, high correlations with CR, whereas CR and MbEa correlate on a lower level. For these reasons, frequent criticism concerning the discriminant validity has been articulated (Yukl, 1999b). Obviously, the transformational scales do not differentiate to a large degree, and CR and MbEa do not make up a common factor. Furthermore, MbEp and LF are consistently correlated.

Even though several studies were interpreted as being a confirmation of the factorial structure of the MLQ, a closer look at the results reveals that although the model with the highest number of factors always had the best fit and even showed significant improvement to other factor models, most of the reported fit-indices did not meet the criteria for a good fit. In those studies, where the nine-factor model did show a good fit, other possible factor models with one or two factors less usually also provided good fit-indices. Another strategy to reach the fit-criteria was to reduce the number of items according to modification indices. Problems of this strategy, however, were that some of the studies tested these reduced item-sets with the same samples, and that the narrower tapping of the construct that might evolve from the reduction of items was mostly not commented on. The most recent analysis of Antonakis et al. (2003) provides strong support for the factorial model. If homogenous samples or heterogeneous samples are better in order to examine factorial models is still questionable. A lot of studies, however, did not support the factor structure of the MLQ. In most of them, the transformational scales collapsed into one factor, also supporting those studies that found higher order factors of transformational and transactional leadership, or were even combined with CR. On the other hand, MbEp and LF were often found to form a passive-avoidant facet of leadership. Bass (1999a) commented this as follows:

> Usually, the transformational scales were found in individual studies of single samples to be intercorrelated, and negatively correlated with management-by-exception and laissez-faire leadership. Therefore, many investigators searching for orthogonal solutions were quick to adopt a single factor of transformational leadership with several transactional factors. There was some merit in this, for when one inspected the intercorrelation matrix, starting with the highest loaded scale of charisma and proceeding to line op the remaining scores, those scores systematically became less highly correlated with charisma and with each other. Thus, one could conceive of charisma as Spearman's g and the remaining scale scores as specific factors. (p. 6)

Nevertheless, also studies that were not looking for orthogonal solutions found single transformational or active leadership scales.

The correlational pattern also provides a serious problem in those studies that confirm the nine-factor model, or other models that split up the transformational factors. The correlations of the transformational scales are too high when interpreting those scales as being separate behavioral facets in the view of those who fill out the questionnaire. Furthermore, although Antonakis et al. (2003) successfully showed that the MLQ correlational pattern varies depending on the contextual factors, one problem occurs regardless of sample homogeneity or context: the high correlation of the transformational scales and CR (Goodwin et al., 2001).

In answer to the upcoming criticism, Bass and Avolio (1993) acknowledged the high overlapping of the transformational scales but underlined the usability of the MLQ for diagnostic purposes and training. However, the overlapping of transformational and transactional facets is not commented upon. Although early analyses by Bass (1985) show that transformational leadership and CR load on one higher-order factor of active leadership, this has not lead to a rethinking of the allocation of CR to the transactional scales. One solution for this problem could be the suggestion made by Goodwin et al. (2001) - that of separating CR into facets of the explicit and implicit contracts. This,

though, could be difficult to resolve with scales that are only composed of four items (as for example with the MLQ 5X Short).

Furthermore, one should note that in their latest publication of the MLQ, Bass and Avolio (2000) suggest a six-factorial model for the MLQ with three transformational scales (charisma/inspiration, IS, IC), two transactional scales (CR and MbEa) and a passive-avoidant factor (the combination of MbEp and LF; see Rowold and Grabbe, in review). Therefore, not even the authors have agreed on one definite factorial structure of the instrument. Altogether one can conclude that a definite factorial structure of the MLQ is still pending.

2.3.4. The German version of the MLQ

As already mentioned, the MLQ is available in several languages. In addition, the workshop that is sold by Bass and his colleagues as a supplement to the questionnaire was already held in European countries (Bass & Avolio, 1990c). The question that arises is in how far the concept of transformational leadership is transferable to other cultures; in this case, the German culture. Based on his theoretical framework, Bass (1996) proposed that the concept of leadership is universal across cultures. In support of this, DenHartog, House, Hanges, Ruiz-Quintanilla, and Dorfmann (1999) found that elements of transformational leadership were universally reported as highly effective across 62 nations. However, leadership behaviors may vary as a function of national culture (Dorfman et al., 1997). Hence, Antonakis and House (2002) conclude "that the FRLT [full range of leadership theory] may be universal, but the manner in which leaders enact the full-range of leader behaviors will vary" (p. 16).

A direct comparison

Kuchinke (1999) examined transformational leadership in an American and a German telecommunication company, both having their headquarters in the USA. In addition to the comparison of the leadership profiles in both countries, he also examined if possible divergences were due to cultural differences. Due to the historic background of Germany and the experiences with the Third Reich, affective identification with the leader is not very common. Tasks and limits of leadership are clear and defined in a

formal way, therefore more in support of transactional leadership behaviors. Therefore, Kuchinke assumed that transformational leadership will be predominant in the USA, whereas in Germany, transactional behaviors will be displayed more frequently. However, the examination of the leadership profiles in America and Germany, obtained with the MLQ 5X, showed that only on two of the four transformational dimensions differences in the frequency of the particular leadership behavior can be found (see Table 18).

The American leaders have higher values on both charisma and IM. The affiliation to one of the countries, however, only accounts for a small portion of the variance in these scales (charisma: ω^2 =.01, IM: ω^2 =.02, Kuchinke, 1999). No differences were found for the transactional scales.

Table 18. Means and standard deviations for the American and German leaders (Kuchinke, 1999, S.145)

	USA		Germany	
Scale	***M***	***SD***	***M***	***SD***
Charisma	2.49	.96	2.21	.74
Inspirational Motivation	2.67	1.02	2.27	.85
Intellectual Stimulation	2.23	.97	2.34	.79
Individual Consideration	2.11	1.06	2.18	.92
Contingent Reward	2.24	1.04	2.23	.90
Management by Exception	1.47	.71	1.48	.54

Furthermore, Hofstede's (1980) cultural dimensions were at the center of interest in this investigation as these could indicate possible bases for the obtained differences in leadership behavior. Hofstede formulated a taxonomy for the classification of cultural differences referring to organizations in several countries. Five cultural dimensions were formulated: power distance (the acceptance and expectancies of persons with little power that power is equally distributed), individualism/collectivism (the degree of acceptance of group members that individuals are more concerned for their own good than for that of the group), masculinity/femininity (masculine countries value success, competition, and self-assertion more than the feminine merits of solidarity and the concern of others), uncertainty avoidance (the degree up to which changes, ambiguity,

and uncertainty are avoided), and long term orientation (the organization's alignment to long-term instead of short-term goals). In his research, Hofstede found that the USA and Germany differ on three of the five dimensions, although being counted to the same group of countries (Hofstede, 1980, 2001). Germany showed higher values on the dimension of uncertainty avoidance as well as lower power distance and individualism/collectivism values than the USA. An examination of leaders in several cultures, conducted by Gerstner and Day (1994), showed that diverse leadership prototypes were predominant in different countries. The dimensions identified by Gerstner and Day that were useful for the differentiation of leadership prototypes were labeled, according to Hofstede (1980), as power distance, uncertainty avoidance, and individualism. Differences between Germany and the USA were found on the power distance and individualism dimensions. The differences found by Hofstede, however, could not be replicated in Kuchinke's (1999) study. In his study, Germany showed lower values on the masculinity/femininity and individualism/collectivism dimensions as well as higher values for long term orientation. The other two scales were not included in the study due to unsatisfactory scale reliabilities. An analysis of the influence of those cultural dimensions on the differences within the charisma and IM scales showed that all three cultural dimensions had predictive power for the leadership styles, masculinity being the strongest predictor (e.g. charisma: masculinity: β = -.19, long-term-orientation:β = -.13, individualism: β = -.09). Together, the three cultural dimensions accounted for seven percent of the variance in each leadership style. Leadership style, therefore, is different in USA and Germany, and, furthermore, this can be, in parts, accounted to the different cultures. One has to take into consideration, however, that culture is only a weak predictor for the differences in leadership style, and that in Kuchinke's study differences in leadership behavior were only found for two scales of transformational leadership. Taking the history of Germany, the differences in charismatic behavior could be stronger influenced by the experiences with the Third Reich. What should be noted, however, is that there is transformational leadership in Germany and that these behaviors are displayed more than MbE behaviors. Therefore, one can assume that, in spite of the cultural differences found by Hofstede (1980, 2001) and Gerstner and Day (1994), transformational leadership exists in Germany as well. This is also supported by findings that leadership prototypes and ideals tend to be transformational regardless of the country (Bass & Avolio, 1997; Brodbeck et al., 2000; Brodbeck, Frese, & Javidan, 2002; House et al., 1999). "In line with the global trend,

ideal leadership in Germany is perceived to be charismatic/transformational" (Brodbeck et al., 2002, p. 24).

German versions of the MLQ

To date, three or four German versions of the MLQ exist. Kuchinke (1999) reports a translation of the MLQ 5X that he obtained from the test authors. For this version, Kuchinke names six scales (charisma, IM, IS, IC, CR, and MbE). This however would not speak in favor for the 5X version of the MLQ, but rather for version 5R. Apart from the scale reliabilities that ranged from α = .68 to α = .83, he does not give any further information concerning the examination of the underlying factor structure. Geyer and Steyer (1998a, 1998b) used a German version of the MLQ 5R to measure transformational leadership in Austrian banks. (As this used to be the official translation that can be purchased by the authors, this might also be the version used by Kuchinke.) Due to the reported high correlations among the transformational scales, and the fact that the factorial structure often failed replication in American studies, Geyer and Steyer also investigated the structure of the MLQ. The reliabilites of the proposed MLQ scales were satisfying, the correlations between the transformational scales and with CR ranged between r = .68 and r = .85, and therefore confirmed earlier American results. The CFA of the proposed structure yielded a poor model fit (χ^2 = 16082, df = 2058, *NFI* = .70, *NNFI* = .71, *CFI* = .73, *RMR* = .11). A therefore conducted exploratory factor analysis (EFA) yielded four factors: core-transformational leadership (contains items of charisma, IM, IS, and IC), individualized consideration – mod (IC, as well as charisma items that emphasize relational aspects), contingent reward – mod (CR, as well as IC items that express verbal feedback), and management by exception passive (contains MbE and LF items). The number of items was reduced due to the results of the exploratory and subsequent confirmatory factor analyses. All in all, the modified model consists of 35 items. The fit indices for the calibration and the validation sub-sample were χ^2 = 1701, df = 546, *NFI* = .88, *NNFI* = .91, *CFI* = .91, *RMR* = .06, and χ^2 = 2090, df = 595, *NFI* = .85, *NNFI* = .89, *CFI* = .89, *RMR* = .07 respectively. The correlations among theses scales ranged from r = -.16 to r = .70, and therefore were considerably lower than those obtained with the original model. The authors point out, however, that this new model is still a confirmation of the transformational/transactional leadership concept as the differentiation between these leadership styles is maintained within the

new scales as well. One can also say that this is a further confirmation of former results, indicating that the differentiation of transformational leadership into several sub-facets can not be supported. A more recent version of the MLQ was translated by Felfe (in press). However, he modified the instrument in several points. The LF items were presented in a positive formulation so that the item *The person I am rating is absent when needed* now reads *The person I am rating is there when needed*. This was undertaken due to possible effects of social desirability for the self-version where the leader assesses his own leadership behavior. For further analyses, these LF values are supposed to be recoded. Furthermore, six items were added in order to tap additional aspects of charisma. The scale reliabilities ranged from α = .70 to α = .92, only MbEa did not reach the Nunnally (1978) criterion with α = .63. As expected, the correlations of the transformational scales were, again, quite high (ranging from r = .66 to r = .82). CR also showed high positive correlations with the transformational scales (ranging from r = .69 to r = .76). MbEp and LF showed negative correlations with these scales. MbEa also correlated positively with the transformational scales (ranging from r = .25 to r = .31). In order to examine the underlying factor structure, Felfe (in press) conducted a principal components analysis with oblique rotation of the leadership items that yielded five factors. The first factor contained items of the former scales IIA, IS, IC and the additional charisma items (and explained 14.8% of the variance). The second factor (12.9% of variance) combined IIB and IM items. CR items load on both of the transformational factors; more strongly, though, on factor two. MbEp and LF made up the third (6.3%) and fourth (4.5%) factor. Factor five (2.9%) contained the former MbEa items. Furthermore, Felfe conducted several CFAs in order to examine the factor structure of the MLQ. All in all, nine models with first-order factors and one model with higher-order factors were tested (see Table 19). The nine-factor and the eight-factor model show the best fit-indices.

Table 19. Fit-indices of the MLQ factorial models examined by Felfe (in press)

Model	χ^2	***df***	***GFI***	***AGFI***	***RMR***
Model 1	12981.70	477	.78	.75	.10
Model 2	11232.74	476	.81	.78	.10
Model 3	10802.50	474	.82	.79	.10

Table 19 continued

Model	χ^2	*df*	*GFI*	*AGFI*	*RMR*
Model 4	7734.39	471	.86	.83	.07
Model 5	6211.36	467	.89	.86	.07
Model 6	6158.71	462	.89	.86	.07
Model 7	5993.55	456	.89	.86	.07
Model 8	5588.04	449	.90	.87	.07
Model 9	5552.57	441	.90	.87	.07
Model 10	5771.29	463	.89	.87	.07

Note: Model 1 = one general factor, model 2 = two correlated factors [active – transformational, contingent reward (CR), management by exception active (MbEa)/passive – MbE passive (MbEp) and laissez-faire (LF)], model 3 = three correlated factors (transformational and CR/MbEa/passive), model 4 = four correlated factors (transformational and CR/MbEa/MbEp/LF), model 5 = five correlated factors [idealized influence attributed (IIA), intellectual stimulation (IS), individualized consideration (IC)/ idealized influence behavior (IIB), inspirational motivation (IM), contingent reward (CR)/ MbEa/MbEp/LF], model 6 = six correlated factors (IIA, IS, IC/IIB, IM/CR/MbEa/MbEp/LF), model 7 = seven correlated factors (IIA, IS, IC/IIB/IM/CR/MbEa/MbEp/LF), model 8 = eight correlated factors (IIA/IS/IC/IM/IIB, CR/MbEa/MbEp/LF), model 9 = nine correlated factors (IIA/IIB/IS/IC/IM/CR/MbEa/MbEp/LF), model 10 = four correlated higher-order factors (trafo 1: IIA, IS, IC – trafo 2: IIB, IM, CR – passive: MbEp and LF – MbEa);
GFI = goodness of fit index, AGFI = adjusted GFI, RMR = root mean square residual.

However, the more parsimonious models with seven, six, or five factors also showed reasonable fit-values. As none of the models really reached the criteria for a good fit, these models should also be taken into account. The comparison of model five, six, and seven shows that a separation of IIB, IM, and CR does not lead to an improvement in fit. Neither does the separation of IIB and CR in the comparison of models seven and eight lead to fit-improvement. All in all, the author recommended the use of the proposed nine-factor model for this translation of the MLQ. Due to the somewhat unsatisfying results of Felfe (in press) concerning the factorial structure, Rowold and Grabbe (in review) also translated the MLQ 5X into German. They did not modify any of the original item formulations, nor did they add any scales.

A comparison of the CFA fit-indices of diverse factorial models referred to in the literature was supposed to give further information about the dimensionality of the instrument. As could be seen in the other factorial examinations of the MLQ, the nine-factorial model provided the best fit-indices (see Table 20). However, most of the models reached the criteria for a good fit. The one-factor to the three-factor models

show adequate *GFI*, *NNFI*, and *CFI* values but miss the criterion of .10 for the *RMR*. The six-factor, seven-factor and the nine-factor models do have acceptable *RMR* values.

Table 20. Fit-indices of the MLQ factorial models examined by Rowold and Grabbe (in review)

Modell	χ^2	*df*	*GFI*	*NNFI*	*CFI*	*RMR*
(1)	45817.61	666	NA	NA	NA	0.380
(2)	3464.49	593	0.924	0.929	0.936	0.102
(3)	3480.15	593	0.924	0.928	0.936	0.102
(4)	3450.30	591	0.925	0.929	0.937	0.101
(5)	3178.20	588	0.931	0.935	0.943	0.097
(6)	3152.36	584	0.931	0.935	0.943	0.097
(7)	2947.17	580	0.936	0.940	0.948	0.093
(8)	2920.63	574	0.936	0.940	0.948	0.093
(9)	2515.00	559	0.945	0.948	0.957	0.086

Note: (1) null-model, (2) one general factor (3) two correlated factors: active-constructive [idealized influence attributed (IIA), idealized influence behavior (IIB), inspirational motivation (IM), intellectual stimulation (IS), individualized consideration (IC), contingent reward (CR), management by exception active (MbEa)] vs. passive-avoidant [management by exception passive (MbEp) and laissez-faire (LF)], (4) three correlated factors (IIA, IIB, IM, IS, IC/ CR, MbEa/ MbEp, LF), (5) four correlated factors (IIA, IIB, IM, IS, IC/ CR/ MbEa/ MbEp, LF) (6) five correlated factors (IIA, IIB, IM, IS, IC/ CR/ MbEa/ MbEp/ LF), (7) six correlated factors (IIA, IIB, IM/ IS/ IC/ CR/ MbEa/ MbEp, LF), (8) seven correlated factors (IIA, IIB, IM/ IS/ IC/ CR/ MbEa/ MbEp/ LF), (9) nine correlated factors (IIA/ IIB/ IM/ IS/ IC/ CR/ MbEa/ MbEp/ LF).

Therefore, a lot of the tested factor-models provide a useful solution for the MLQ dimensionality. Although the nine-factor model provides the best fit-indices, the six-factor model should also be taken into account as the fit values are only slightly smaller than those of the nine-factor model, but it is a more parsimonious model than the nine-factor model. No higher-order models were tested. The reliabilities of the nine scales yielded acceptable values except for one scale in the manager sub-sample (IC) and one scale in the student sub-sample (CR).

The correlational pattern of the nine scales found by Rowold and Grabbe is somewhat different to the patterns found in other studies (see Table 21). The correlations of the

transformational scales are lower than for example the ones reported by Felfe (in press). Particularly, the correlations of the IM scale with the transformational scales are lower than in comparable samples; between IC and IM no significant correlation could be found. Furthermore, IM correlates higher with CR than with the transformational scales. IS shows the highest correlations within the transformational scales, its correlation with IIA and IC is a lot higher than with the other transformational scales. Apart from these 'outliers', the correlation pattern shows a somewhat familiar structure. LF and MbEp correlate positively with each other and negatively with the other scales; MbEa shows no definite pattern.

Table 21. Correlations of the nine MLQ scales reported by Rowold and Grabbe (in review)

Scales	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**
1. IIA								
2. IIB	.65							
3. IM	.33	.34						
4. IS	.72	.59	.12					
5. IC	.68	.56	.08	.81				
6. CR	.54	.55	.40	.36	.44			
7. MbEa	.04	.11	.02	.01	.01	.18		
8. MbEp	- .45	- .38	- .10	- .42	- .38	- .28	- .08	
9. LF	- .61	- .50	- .16	- .55	- .53	- .36	- .08	.64

Note: IIA = idealized influence attributed, IIB = idealized influence behavior, IM = inspirational motivation, IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward, MbEa = management by exception active, MbEp = MbE passive, LF = laissez-faire. $r > |.09|$: $p < .05$, $r > |.11|$: $p < .01$

The German translations replicate the American findings concerning the factor structure. So far, no definite solution has been found. Neither Geyer and Steyer (1998a) nor Felfe (in press) were able to replicate the proposed structure. Instead, the transformational scales collapsed into fewer factors and CR showed high loadings on these. The only full replication was achieved by Rowold and Grabbe (in review). Their

sample, however, was mainly made up of students. Therefore, an 'assured' factorial model for the German version of the MLQ questionnaire does not exist.

2.3.5. The MLQ and its relation to other variables

The effectiveness of transformational leadership is acknowledged throughout the literature despite the unsatisfying results when dealing with the structure. "Evidence supporting the transactional-transformational leadership paradigm has been gathered from all continents except Antarctica – even offshore in the North Sea" (Bass, 1997, p. 130). Empirical studies show that the transformational facets have a stronger relation to success criteria than the transactional scales (cf. Lowe et al., 1996). In several studies, hierarchical regression analyses demonstrate that the addition of the transformational scales leads to a significant higher explanation of variance in diverse criteria (Bass & Avolio, 1995a; Geyer & Steyrer, 1998a; Vandenberghe et al., 2002). This explanation of additional variance is the empirical confirmation of the aforementioned augmentation effect. To date, several meta-analyses were conducted in order to test the overall effects and moderators of the relationship between leader behaviors and outcomes as for example effectiveness.

Meta-analyses

Gaspar's (1992; cited by Bass, 1997) meta-analysis of MLQ findings revealed that the hierarchy of correlations (i.e. transformational scales correlate highest with outcomes, then follow the transactional scales, LF shows negative correlations) with objective outcomes and perceived effectiveness is higher for military respondents than for civilians. Furthermore, the correlations with effectiveness were generally higher than for the objective outcomes (maybe due to single-source bias). For the military sample, the correlations of the transformational scales with the objective performance ranged from r = .46 to r = .57, with the effectiveness criterion from r = .51 to r = .75, for the civilian sample correlations ranged from r = .26 to r = .29 with the objective criteria and from r = .47 to r = .57 with the effectiveness criteria (Bass & Avolio, 1997). Another meta-analysis conducted by Fuller, Patterson, Hester, and Stringer (1996) used only Bass' charisma scale in order to examine the relations with satisfaction with the leader, performance (defined as to include perceptions of extra effort as well as any type of real

or objective measures), and perceived effectiveness. Furthermore, four moderators were taken into account. The first moderator was the distinction between subjective and objective measures of performance, the second was the type of research design, the third was the level of the focal leader within the organization, and the fourth moderator taken into account was the sample context, as military, civilian, or student contexts may be more or less conducive to charismatic influences. The results of their analyses suggest that charisma has a general positive influence on the aforementioned outcomes. The average correlations for all the samples were $\bar{r}$ = .45 with performance, $\bar{r}$ = .78 with perceived effectiveness, and $\bar{r}$ = .80 with satisfaction with the leader. The moderator analyses showed that there was a significant difference between subjective and objective performance outcome measures. As expected, the correlations were higher for subjective as compared to objective criteria. Furthermore, in multi-source data samples, correlations between charisma and performance were lower than in samples with percept-percept data. The level of the focal leader, however, did not moderate the relationship between charisma and performance and effectiveness criteria. This is in line with the assumption that transformational or charismatic leadership appears and is effective on all organizational levels (Bass & Avolio, 1993a). The sample context, on the other hand, did have a significant influence on performance and effectiveness relationships. Military samples showed higher correlations with these criteria than civilian samples. Furthermore, student samples showed higher correlations with performance than the civilian samples. No significant differences were found for the relationship of charisma and satisfaction.

The meta-analysis conducted by Lowe et al. (1996) is by far the most widely cited quantitative review of the transformational literature to date (Dumdum, Lowe, & Avolio, 2002). Starting point of their investigation was the finding that, although the direction and significance of the relationship of the transformational scales with external criteria appeared to be consistent, the strength of this association was not (see Table 22). The reliability scores for the scales were satisfying, apart from MbE which did not reach the criterion of α = .7.

As the range of correlations with an overall criterion was very high, Lowe et al. also examined three potential moderators for the relationship with effectiveness criteria, namely the type of organization, the level of the leader, and the type of criterion. Type of criterion differentiates between subordinate measures, where the rating of the

leadership behavior and of the effectiveness criterion were given by the same source, and organizational measures which combine hard criteria (e.g. profit) and measures such as supervisory performance appraisals.

Table 22. Overall meta-analysis of the MLQ scales reported by Lowe et al. (1996, p. 404)

Scales	Mean Cronbach's α	Mean scale score	Range of correlation coefficients	Mean raw correlation	Mean corrected correlation
1. Charisma	.92	2.52	.10 to .91	.62	.71
2. Individualized Consideration	.88	2.50	-.01 to .84	.53	.62
3. Intellectual Stimulation	.86	2.48	.08 to .89	.51	.60
4. Contingent Reward	.82	1.83	-.25 to .72	.34	.41
5. Management by Exception	.65	2.32	-.54 to .47	.04	.05

Contrary to the authors' expectations, transformational leadership behaviors were more commonly observed in public than in private organizations. Furthermore, MbE is also more common in public organizations. CR showed no differences in the mean scale scores for the type of organization. The type of organization also partially moderated the relation with an overall effectiveness criterion. Charisma, IS and MbE showed significant differences in the mean effect sizes, whereby higher positive relationships were found in public organizations. Also contrary to the authors' expectations, low level leaders showed more transformational and MbE behaviors than high level leaders. No differences were found for CR. The relationship of the MLQ scales with effectiveness criteria, however, was not moderated by the level of the leader, whereas large and significant differences were found between subordinate perceptions of effectiveness and organizational measures of effectiveness for all five MLQ scales. As expected, higher correlations were found for subordinate measures than for organizational measures. Lowe et al. (1996) conclude that "transformational leadership behavior that elicits second-order changes in employee efforts is more highly associated with effectiveness than the traditional first order changes resulting from transactional behaviors" (p. 420).

The primary purpose of the study of Dumdum et al. (2002) "was to update and extend the work of Lowe et al. (1996). Specifically...to examine all research using the MLQ that was not included in the Lowe et al. (1996) review" (p. 36). They therefore searched the literature from 1995 until 2002 and examined the relation of transformational leadership with effectiveness and satisfaction. As newer studies were used for this meta-analysis, the range of transformational and transactional scales was broader. The aforementioned nine scales of the latest version are reported. All the scales reliability scores are satisfying except the one for MbEp (see Table 23). The mean scale scores support the suggestion made by Bass and Avolio (1994) that an effective leader should show more transformational leadership behaviors than CR, more CR than MbE behaviors, and that he should show LF behaviors the least. As no differences were found for means and reliabilities for the effectiveness and satisfaction sub-samples, these are not reported here.

Table 23. Meta-analysis results reported by Dumdum et al. (2002, pp. 42/43 and 46/47)

	Overall		Effectiveness			Satisfaction		
Scales	**Mean Cronbach's α**	**Mean scale score**	**Range of correlation coefficients**	**Mean raw correlation**	**Mean corrected correlation**	**Range of correlation coefficients**	**Mean raw correlation**	**Mean corrected correlation**
IIA	.82	2.75	-.20 to .89	.55	.68	-.14 to .93	.72	.90
IIB	.72	2.76	-.16 to .87	.52	.68	-.14 to .83	.54	.73
IM	.86	2.74	-.14 to .85	.46	.55	-.12 to .93	.62	.75
IS	.83	2.43	-.19 to .90	.47	.57	-.12 to .86	.58	.73
IC	.82	2.61	-.27 to .89	.47	.59	-.24 to .93	.64	.81
CR	.80	2.42	-.34 to .87	.45	.56	.08 to .89	.60	.76
MbEa	.75	1.93	-.39 to .50	.06	.08	-.62 to .35	-.07	-.09
MbEp	.69	1.70	-.76 to .36	-.28	-.38	-.69 to .43	-.35	-.46
LF	.76	0.79	-.69 to .51	-.29	-.53	-.73 to .55	-.41	-.53

Note: IIA = idealized influence attributed, IIB = idealized influence behavior, IM = inspirational motivation, IS = intellectual stimulation, IC = individualized consideration, CR = contingent reward, MbEa = management by exception active, MbEp = MbE passive, LF = laissez-faire.

All in all, the mean correlations for the transformational scales with effectiveness and satisfaction were positive and high. Satisfaction showed higher relationships with the leadership scales. As in other studies, CR also showed high positive correlations with the criteria. They were comparable in height with the correlations of the transformational scales. MbEa showed nearly no relationship with effectiveness and satisfaction, whereas MbEp and LF had high negative relationships with the criteria. The correlations also support former remarks that there is a hierarchy of correlations, with the highest positive correlations for transformational scales and negative correlations for the passive scales MbEp and LF. What should be noted, however, is that there is a huge range within the reported correlations for all the MLQ scales. For all examined relations, positive as well as negative correlations are reported, except for the relation of CR and satisfaction. Based on these results, Dumdum et al. decided to test for the moderators identified by Lowe et al. (1996), namely the type of organization and the type of criterion. Confirming the Lowe et al. results, IIA showed higher correlations with effectiveness in public organizations (Dumdum et al., 2002). However, IIA, IM, IS, and IC correlated higher with effectiveness in private than in public organizations. An overall confirmation was found for the moderating effects of the type of criterion. As in the previous meta-analysis by Lowe et al., Dumdum et al. (2002) found higher correlations for subjective than for objective criteria. For example, the correlations with the transformational scales with subjective criteria were $\bar{r}$ = .85 (IIA), $\bar{r}$ = .76 (IIB), $\bar{r}$ = .74 (IM), $\bar{r}$ = .71 (IS), and $\bar{r}$ = .75 (IC), with objective criteria they were $\bar{r}$ = .23 (IIA), N/A (IIB), $\bar{r}$ = .20 (IM), $\bar{r}$ = .21 (IS), and $\bar{r}$ = .20 (IC). A differentiation within the satisfaction criterion (comparing satisfaction with the leader to satisfaction with the job) showed, as could be expected, higher correlations for satisfaction with the leader. All in all, Dumdum et al. conclude that the "hierarchical pattern proposed in the full-range model of leadership has received consistent support over these last 15 years ...[suggesting] that these relationships are enduring and are not episodic in the sense that they are tied to one period in history" (p. 59).

The most recent meta-analysis of transformational and transactional leadership was conducted by Judge and Piccolo (2004), who examined their relative validity (i.e. the correlations with external criteria). As the intercorrelations of the transformational scales are reported to be very high, the authors combine the scales, treating them as indicators of a higher order factor. As expected, this combined scale showed a high

positive correlation with CR (ρ = .68), moderate correlations with MbEa (ρ = .17) and MbEp (ρ = -.20), and a high negative correlation with LF (ρ = -.65). In addition to the research questions addressed by previous meta-analyses, the authors also investigate the differences of the validities of transformational versus charismatic leadership (as assessed with the MLQ), and the augmentation hypothesis. On the whole, transformational leadership showed the highest estimated true score correlation with the overall criterion, closely followed by CR (see Table 24). MbEp and LF have negative correlations with the criterion. Although the correlations are quite high, they do not reach the values reported by Lowe et al. (1996). In the more differential analysis of the criteria the highest correlations with transformational leadership were found for satisfaction with the leader and leader effectiveness, for CR they were found for job satisfaction and follower motivation.

Table 24. Estimated true score correlations of the MLQ scales to leadership criteria as reported by Judge and Piccolo (2004, pp. 759/760)

Criteria	Transformational	CR	MbEa	MbEp	LF
Overall	.44	.39	.15	-.18	-.37
Follower job satisfaction	.58	.64			-.28
Follower satisfaction with the leader	.71	.55	.24	-.14	-.58
Follower motivation	.53	.59	.14	-.27	-.07
Leader job performance	.27	.45	.13	.00	-.01
Group or organization performance	.26	.16	-.09	-.17	
Leader effectiveness	.64	.55	.21	-.19	-.54

Note: CR = contingent reward, MbEa = management by exception active, MbEp = MbE passive, LF = laissez-faire.

For two of these criteria, transformational leadership had significant higher correlations than the other scales: follower satisfaction with the leader (t = 5.46, p < .01) and leader effectiveness (t = 2.67, p < .01). CR also showed significantly higher correlations for two of the examined criteria than transformational leadership: leader job performance (t = -3.25, p < .01) and follower job satisfaction (t = -2.21, p < .05), indicating that CR is

more important for job related outcomes, whereas transformational leadership has a higher impact on leader related ratings.

As expected, MbEa shows much smaller correlations with the criteria; MbEp and LF have negative correlations. It should be noted, however, that LF has a weaker correlation with follower motivation than MbEa and MbEp. Furthermore, on the one hand MbEa has a relationship with leader job performance, on the other hand MbEp and LF do not. Moderator analyses confirm earlier results as the correlations were influenced by the independence of the data source (same source vs. different source). Furthermore, the correlations were moderated by the research design (with higher correlations for cross-sectional than for longitudinal studies). CR showed higher correlations for the business sector (ρ = .51), than for military (ρ = .32), and college ρ = .19) settings, or the public sector (ρ = .27). Transformational leadership showed no differences in the correlations for the study setting.

Results concerning the different validities of transformational leadership and charisma show that charisma (ρ = .52) has a slightly higher correlation with the overall criterion than transformational leadership (ρ = .42). However, the difference between these two was not significant. The regression analyses conducted in order to examine the augmentation effect revealed that transformational leadership significantly predicted four of the five criteria (see Table 25), whereas CR significantly predicted all five criteria. Although weaker in magnitude, the other scales also significantly predicted nearly all of the criteria. All in all, though, it can be concluded that transformational leadership did add explained variance beyond the effects of transactional and LF leadership to most of the criteria.

It is noteworthy that for leader job performance, where transformational leadership has no significant impact, CR shows the highest β-weight and the impact of LF is in the same direction. Overall, the squared regression weights were all significant, indicating that the transformational, transactional, and LF leadership are important predictors of the examined criteria.

Table 25. β-weights for regression analyses provided by Judge and Piccolo (2004, p. 763)

Scale	Overall	Follower satisfaction with the leader	Follower motivation	Leader job performance	Leader effectiveness
Transformational	.24	.52	.32		.37
CR	.11	.06	.22	.45	.15
MbEa	.03	.07	.12	.11	.04
MbEp	-.08		-.10		-.06
LF	-.09	-.13		.22	-.14
R^2	.17	.44	.28	.18	.35

Note: CR = contingent reward, MbEa = management by exception active, MbEp = MbE passive, LF = laissez-faire; all displayed β-weights are significant ($p < .01$).

All in all, these meta-analyses provide substantial support for the impact of transformational leadership on external criteria. A very consistent finding seems to be the hierarchy of correlations, starting with transformational leadership and ending with LF. However, several things should be kept in mind. Firstly, CR shows correlations with the examined criteria that are comparable to those of transformational leadership. This is also in line with the high correlations reported for CR and the transformational scales. Furthermore, the range of the reported correlations is very high. Therefore, the search for moderator variables is important. So far, one moderator has been confirmed in all of the meta-analyses. The type of criterion (subjective vs. objective) provides different relationships between the leadership styles and outcome criteria, whereby the subjective measures show higher correlations than the objective ones. This is consistent with research on the percept-percept problem of questionnaire studies, pointing out the problem of common method bias (Avolio, Yammarino, & Bass, 1991; Lowe et al., 1996). Hence, the reported meta-analyses provide different results for the type of organization or setting, suggesting that further research is needed into this topic.

Further research

The reported meta-analyses ensure the impact of transformational leadership on effectiveness, satisfaction and follower motivation. Apart from that, its impact on several other criteria has been examined. The following section will present selected research findings obtained with the MLQ.

In one of the earliest studies of transformational and transactional leadership, Singer (1985) also showed that the transformational scales had higher correlations with effectiveness and satisfaction measures among New Zealand managers. An exception, however, was the relation to work-unit performance that was highest for CR. The first empirical examination of the augmentation effect was conducted by Waldman et al. (1990). In order to test the hypothesis that charisma adds to CR behavior for the explanation of leader effectiveness, hierarchical regression analyses were conducted. CR was entered first into the analyses. For all three effectiveness criteria, CR accounted for significant variance, and charisma added a significant unique portion of explained variance to all of them. Hereby, more overall variance was explained for the subjective effectiveness criterion (R^2 = .75) than for the two objective measures (R^2 = .15 resp. R^2 = .14). Charisma added an R^2 of .34 for the subjective and R^2 = .10 resp. R^2 = .08 to the explanation of the effectiveness criteria. In additional analyses the order of variables entered was changed. The results show that CR does not add explained variance beyond that contributed by charisma. A more differentiated analysis on the relation of transformational and transactional leadership and components of job satisfaction showed that transformational leadership had significant positive correlations with nurses' satisfaction with the professional status, interactions, organization policy, autonomy, and task requirements (Medley & Larochelle, 1995). No significant correlations were found for all components of job satisfaction and transactional leadership, as well as for transformational leadership and the satisfaction with pay. With this component, although not being significant, transactional leadership showed higher correlations than transformational leadership. In addition to the examination of the effects of transformational leadership on performance and satisfaction, Bycio et al. (1995) investigated its impact on intent to leave and organizational commitment. As expected, the transformational leadership facets and CR had an impact on the decrease of the intention to leave, as there were significant negative correlations with the intent to leave the profession and the intent to leave the job (ranging from r = -.21 to r = -.27 for

intent to leave the profession and from r = -.21 to r = -.32 for intent to leave the job). On the other hand, MbE had only little to do with one's intent to leave (the correlations were r = .10 and r = .13 resp.). Additionally, the augmentation effect of transformational leadership was confirmed for these two facets of intent to leave. However, for both, intent to leave the profession and intent to leave the job, higher correlations were found with affective commitment to the organization than with any of the transformational scales (r = -.37 and r = -.42 resp.). Differentiation of several aspects of organizational commitment according to Allen and Meyer (1990) provided the following results: affective commitment showed strong positive relationships with the transformational scales and CR (ranging from r = .36 to r = .45) and a negative correlation with MbE (r = -.22), continuance commitment was only positively related to MbE (r = .13), and normative commitment showed small but significant positive correlations with the transformational scales and CR (r = .14 to r = .20). The relationship of organizational commitment and transformational leadership was further supported by several studies (see e.g. Bycio et al., 1995; Koh et al., 1995; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Podsakoff et al., 1996). Furthermore, transformational and transactional leadership show positive correlations with unit cohesion and potency in a platoon leader sample (Bass et al., 2003). The passive-avoidant facets of the full range of leadership model were negatively correlated with cohesion and potency. These variables also partially mediated the effect of leadership on platoon performance. Not only business settings, but also non-profit educational settings were examined. Koh et al. (1995) examined the effects of transformational leadership of teachers on student performance in Singapore. Furthermore, they also investigated the impact of transformational behavior of school principals on organizational citizenship behavior (OCB) of the teachers (rated by the principals). A factorial analysis of the OCB items suggested three factors: altruism, the negatively, and the positively worded items of compliance. Although transformational leadership had a significant impact on the prediction of one sub-facet of OCB (the positively worded compliance facet), it failed to add significant variance to the prediction of the two other sub-facets of OCB. Transactional leadership had no significant impact on any of the OCB facets. Furthermore, the regression analyses reveal that neither transformational leadership nor transactional behaviors had any significant effects in explaining the student performance. Vandenberghe et al. (2002) examined the effects of transformational leadership on altruism in a sample of nurses. For the three examined

facets of altruism, work-related altruism, nonwork-related altruism, and patient-related altruism, only modest correlations were found with transformational leadership (ranging from r = .06 to r = .16), with the highest correlations for the work-related facet. The highest correlations with altruism were found for MbEa. Transformational leadership added to transactional leadership only in accounting for the work-related altruism facet. The relation of transformational and transactional leadership to OCB has been tested in several studies, also using questionnaires other than the MLQ (Podsakoff et al., 1990). However, results obtained by Pillai, Schriesheim, and Williams (1999) suggest that the relation of transformational leadership to OCB is indirect through procedural justice and trust. They furthermore showed that transformational leadership is linked to procedural justice, whereas transactional leadership relates to distributive justice.

On the side of the leader's personality, Howell and Avolio's (1993) research shows that the relations between locus of control and performance is mediated by transformational leadership behavior. Internal oriented leaders may be more confident in their ability to influence their followers and have enhanced imagination and a tendency to act and innovate (Howell & Avolio, 1993). This might be reflected in their exhibition of more transformational behaviors. Furthermore, as examined by Turner et al. (2002), higher levels of moral development of the leader is related to greater use of transformational leadership. Based on conceptual relevance for transformational leadership, Hetland and Sandal (2003) examined four personality factors of leaders: warmth, reasoning, openness to change, and tension. Taken together, all four variables explained ten percent of the variance in transformational leadership but failed to make a significant contribution to the other examined variables (gender and organization). The strongest correlation with transformational leadership was found for warmth, supporting earlier findings of Judge and Bono (2000) having to do with a relation of transformational leadership and agreeableness. A negative correlation was found for tension, indicating that high tension reduces the likelihood of transformational behavior.

Deluga (1988) found that both transformational and transactional leadership is inversely related to employee influencing behavior. As transactional leaders engage in exchange relationships with their employees, they are more likely to be targets of employee influencing strategies. Hence, higher negative correlations were found for transactional leadership and employee influencing behavior than for transformational leadership.

Taking the type of work into account, Keller (1992, 1995) showed that transformational leadership was more important for the prediction of project quality in research projects, as they are usually more concerned with innovations requiring originality than development projects. This is also supported by findings of Howell and Avolio (1993), suggesting that transformational leaders do perform better in innovative environments, as "the relationship between transformational leadership and consolidated-unit performance was moderated by support for innovation" (p. 900). The relationship of charisma and performance, however, was positive for both situations of high and low support for innovation, although significantly more positive for the high support situation. As the study was conducted in organizations operating in an unstable external environment, the overall high impact of charisma could be accountable for these circumstances.

In addition to studies that measured leadership and outcome variables at the same time, there have also been longitudinal studies and experimental designs to investigate the importance of transformational leadership. Howell and Avolio (1993), for example, found that a branch manager's transformational leadership predicted consolidated business unit performance one year later. Barling, Weber, and Kelloway (1996) examined the effects of a transformational leadership program on three outcomes: the training should result in the subordinates perception of changes in the leadership behaviors, a change of subordinates commitment should occur, and therefore the financial performance of the unit should be enhanced. In order to investigate the relevance of the transformational leadership training program, Barling et al. randomly assigned bank branch managers to either a training or control group. The focus of the training intervention was mainly on IS and, to a smaller degree, on IC behaviors, one reason for this being that charismatic behaviors are much harder to change. Transformational leadership behavior was assessed before and after training intervention. The financial performance was measured using the number of personal loan sales and credit card sales of the unit of the resp. branch manager. The results of their study "suggest the effectiveness of training managers in transformational leadership" (Barling et al., 1996, p. 830). Trained managers were perceived to exhibit more IS, IC, and charismatic behaviors after training than the control group. Furthermore, the training program exerted significant effects on the followers' commitment. Some support was also provided for the effect of the transformational

leadership training program on the examined financial indicators. The effects were in the expected direction and significant for the personal loan sales and marginally significant for the credit card sales. Therefore, the study provides additional support for the effectiveness of transformational leadership on changes in outcomes such as commitment to the organization and financial performance. Two points, however, limit the research results: firstly, training only focused on some of the transformational behaviors, and secondly, the financial outcome was measured on an aggregated level, the managers unit, and did not use individual-level performance indicators. In another experimental study on the effects of transformational leadership training, Dvir, Eden, Avolio, and Shamir (2002) showed the more positive impact of transformational leadership training on direct follower development and on indirect follower performance as compared to a routine eclectic leadership training. The followers' self-efficacy, critical-independent thinking, and the extra effort of followers had higher values after the transformational leadership training of their superiors. The followers of the control group leaders also had smaller values for these three criteria. Furthermore, significant differences between the transformational and the control group were obtained for parts of the routine platoon performance tests. The differences for the other tested variables, internalization of organizational moral values, collectivistic orientation, active engagement, and self-actualization needs, pointed in the right direction even though they did not show any significant differences. In another study examining group decision support systems, it was shown that "groups working under high transformational leaders generated more supportive remarks, more questions about solutions, more embellished ideas, and more original ideas than did groups working under low levels of transformational leadership" (Sosik, 1997, p. 480). In that experimental design, high transformational leaders emphasized the importance of the collective task, expressed confidence in the group, stressed the importance of questioning assumptions, and so forth, whereas the low transformational leader expressed goals and emphasized specific ones, and highlighted the economic payoffs for successful implementations. However, other group effectiveness components, as for example problem clarifications, did not differ significantly for high and low transformational leaders. Taking his results, Sosik concludes that "transformational groups focused more on process-oriented comments (i.e., questions about solutions, solution clarifications), whereas low transformational groups focused more on outcome-oriented comments (i.e. solution units)" (p. 480).

German research

Not only the factorial structure of the MLQ was central to research on transformational leadership in German speaking countries, but also its impact on several outcomes. As already mentioned, transformational leadership is supposed to be a universal concept. In relation to other criteria, however, one should note that

> the FRLT is likely to be universal and hierarchically related to leader outcomes, but that the combinations of behaviors that leaders use in various conditions will vary somewhat to match those conditions. Furthermore, the strength of leader behaviors to outcomes may also vary as a function of contextual conditions. (Antonakis & House, 2002, p. 17)

A few selected results of German studies for the relation of transformational leadership with several criteria are presented here.

Geyer and Steyrer (1998a, 1998b), who were the first to adapt the transformational leadership concept to German speaking countries, examined its effect on the performance of bank branches in Austria. As a subjective performance criterion, the authors used the MLQ scale extra effort. As an objective criterion they measured the relative performance of bank branches, taking into account not only the volume of production but also the potential number of customers of a branch and their specific profiles. This criterion was also split-up into short-term and long-term objective performance. Significant and positive correlations were found for all three performance criteria and Geyer and Steyrer's indicators of core-transformational and core-transactional leadership, whereby the correlations with the core-transformational facet were higher in each case (e.g. the correlation for long-term objective performance with core-transformational leadership was $r = .33$, for core-transactional leadership $r = .21$, (Geyer & Steyrer, 1998b). Individualized consideration - mod showed no significant correlation with long-term objective performance, but positive correlations with the other two criteria. MbEp/LF had negative correlations with all three performance measures. The results also confirm the meta-analytic findings that the correlations with subjective criteria are higher than with objective criteria. Furthermore, the augmentation effect was confirmed. For all three criteria, IC and core-transformational leadership

added significant variance to the other two factors of core-transactional and MbEp/LF leadership.

Felfe (in press) confirmed the hierarchical structure for the correlations with the MLQ scales EEF, EFF, and SAT. The transformational scales showed the highest correlations (ranging from r = .63 to r = .83), followed by the CR (r = .64 to r = .70), and MbEa (r = .21 to r = .28). MbEp and LF showed negative correlations with all three criteria (r = -.55 to r = -.73). This hierarchy was also found for the other examined criteria: affective commitment, OCB, and general job satisfaction. As these criteria were not presented within the block of MLQ items, the correlations with the leadership scales were lower than those for the three MLQ-internal performance criteria. Whereas all scales showed significant correlations with commitment and job satisfaction, IS, MbEa, MbEp, and LF did not have a significant relation with OCB. In addition to these criteria, Felfe also examined the relation of transformational leadership with organizational strain. Two indicators measured this criterion, firstly the subjective testiness of the followers, and secondly the rates of absenteeism. As expected, the hierarchy of correlations was reversed for these two facets. Transformational leadership and CR showed negative correlations with testiness (ranging from r = -.18 to r = -.30) and absenteeism (ranging from r = -.09 to r = -.13; IIB, IS, and CR did not have significant correlations with absenteeism). Furthermore, significant positive correlations were found for testiness and MbEp and LF (r = .29 and r = .27 resp.), and for absenteeism and MbEa (r = .10). For all examined criteria, the augmentation effect was confirmed. As could be expected from the differences in correlations, the portion of additional variance explained through transformational leadership varied from R^2 = .03 for absenteeism to R^2 = .20 for satisfaction. In reference to the statement by Antonakis and House (2002) cited at the beginning of this chapter, the results presented by Felfe (in press) indicate that American leaders show more transformational behavior than German leaders, whereas the transactional leadership behaviors are more frequent in Germany. Differences in correlations were mainly found for MbEa. Whereas the correlations of MbEa with the three MLQ performance criteria showed positive values for the German sample, this relation is reported to be negative in America (Bass & Avolio, 1995a). The hierarchy of correlations was also supported by Rowold and Grabbe (in review). However, they found much smaller correlations for EEF and EFF with CR and the transformational scales (ranging from r = .18 to r = .56). No significant

correlations were found for the transformational scales and SAT nor for MbEp, LF and these three criteria. Yet, in contradiction to the results of Felfe (in press), but in accordance with the results of Bass and Avolio (1995a), MbEa showed negative (but not significant) correlations with these criteria. Examining the relation between transformational leadership and affective commitment, Felfe and Goihl (2002a) provided support for earlier findings, suggesting a moderating role of the organizational context for this relation. They found higher levels of transformational leadership in small, entrepreneurial enterprises than in established, big organizations. Furthermore, the influence of transformational leadership on affective commitment is also moderated by the working conditions. Whereas leadership exerts a very strong influence on commitment in small enterprises, the impact of working conditions is much lower. Conversely, in large organizations, working conditions are a better predictor of commitment than leadership. Therefore, the impact of leadership is stronger when there is a lower level of structure.

All in all, transformational leadership seems to be a universal phenomenon. The transformational scales do correlate with various outcomes in Germany as well. Even more, they add explained variance to the transactional scales. The relationship of the examined variables with MbEa remains unclear, although some researchers report positive correlations. In some there is no definite pattern of correlations. Apart from that, the pattern of relationships with the MLQ scales appears to be no different from results obtained in America. Therefore, further research into the field of transformational leadership seems justified.

2.4 Short summary

"In the past 20 years, a substantial body of research has accumulated on transformational-transactional leadership theory" (Judge & Piccolo, 2004, p. 755). Looking at the spreading of the theory as well as at the research activity in comparison to other leadership approaches, it seems as if this theory has replaced earlier leadership approaches such as the described trait, behavioral or situational approaches. Transformational leadership is seen as moving followers beyond their self-interests as well as elevating the followers' concerns for achievement and the well-being of others or the organization (Bass, 1999b).

One of the most prominent concepts within the transformational approach is the one formulated by Bass (1985). In his recent publications, Bass splits transformational leadership into the subfacets of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Furthermore, he argues that transformational augments the more exchange-based facet of transactional leadership. Transactional leadership can be divided into contingent reward and management by exception. These two leadership aspects, transformational and transactional leadership, together with the non-leadership facet laissez-faire build, as far as Bass and Avolio (1994) are concerned, the full range of leadership.

In order to bolster his body of theory with empirical evidence, Bass (1985) also developed a questionnaire, the MLQ, that measures the full range of leadership. Several versions of this instrument exist. This is due to adaptations to specific research settings (e.g. military, Bass, 1987) on the one hand, and to theoretically and empirically based criticism on the other hand. Using this questionnaire, the effectiveness of transformational leadership was often shown. Transformational leadership shows high correlations with multiple criteria that are interpreted as success criteria, varying from satisfaction with the leader to financial outcome. Thereby, the leadership scales show higher correlations with subjective than with objective criteria (Lowe et al., 1996). This effectiveness was also confirmed in various samples, ranging from teachers (Sahin, 2004) to naval officers (Yammarino & Bass, 1990). Furthermore, the augmenting effect of transformational leadership over transactional leadership is also universally confirmed. However, the questionnaire that is the basis of all these results is still often the focal point of criticism. High correlations occur between the transformational scales. Moreover, the transformational scales also correlate very highly with the transactional facet of CR. The factorial structure of the instrument has not been universally confirmed. Although some of the studies, mostly however the authors, found the proposed structure using EFA or CFA methods with the full or a reduced item set, a lot of studies did not confirm the proposed structure. The complexity of the results concerning the factorial structure of the MLQ is further enhanced by the numerous aforementioned versions of the questionnaire. It is therefore hard to completely confirm or reject the theoretical proposition based on the empirical research body. Noteworthy, however, are the findings of Vandenberghe et al. (2002), that the transformational scales had more in common with the other transformational scales than with its own

indicators. Therefore, higher order models, although not showing comparable fit indices to the first-order models, should not be disregarded. This can also be seen in line with Hinkin and Tracey's (1999) findings that only two-thirds of the transformational leadership items were classified according to their factor in a content adequacy assessment. All in all, it might either be overdone to divide transformational leadership into several sub-facets or the scales derived from statements that are only based on the responses of 70 male South African senior executives do not tap the full range of transformational leadership behaviors, but are too highly related conceptually or gender-wise.

Research concerning the MLQ conducted in German speaking countries supports the findings of the American studies. Here, also, the factorial structure is not yet finally confirmed. However, the effectiveness of transformational leadership with regard to subjective as well as objective criteria has found profound support (Felfe, 2005; Felfe, Tartler, & Liepmann, 2004; Geyer & Steyrer, 1998a; Rowold & Grabbe, in review). The transferability of the transformational concept finds support not only in the studies using the MLQ but also with other transformational or charismatic approaches.

Taking all these empirical findings together, a profound analysis of the validity of transformational leadership seems justified. This is supported even more by the fact that, although several concepts of transformational leadership exist, the MLQ has never been examined in combination with these. Similarly, the research body concerning its relation to other, older leadership theories is very thin. The next chapter therefore examines aspects of the construct validity of the MLQ using the German version by Felfe (in press).