Identification of Transformational Leadership Qualities: An Examination of Potential Biases

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A basic ingredient in transformational leadership development consists in identifying leadership qualities via distribution of the multifactor leadership questionnaire (MLQ) to followers of the target leaders. It is vital that the MLQ yields an accurate and unbiased assessment of leaders on the various leadership dimensions. This article focuses on two sources of bias which may occur in identifying leadership qualities. First, when followers assess the strengths and weaknesses of their leaders, they may have difficulty in differentiating between the various transformational and transactional leadership behaviours. It is found that this is only the case for the transformational leadership attributes because the four transformational leadership dimensions measured by the MLQ correlate highly and cluster into one factor. MLQ ratings on the three transactional leadership dimensions are found not to be interrelated and show evidence for three distinct factors: contingent reward, active management-by-exception and passive leadership. Second, social desirability does not seem to be a strong biasing factor, although the transformational leadership scale is somewhat more socially desirable. These findings emphasize that the measurement of so-called "new" leadership qualities remains a controversial issue in leadership development. Practical implications of these findings and avenues for future research are also discussed.

INTRODUCTION

In recent years organizations have gone through dramatic changes, including flatter and looser structures, downsizing, and horizontal approaches to information flow. On the one hand these changes are due to rapid technological developments, global competition, and the changing nature of the workforce. On

the other hand these organizational transformations and innovations are triggered by interventions such as total quality management and business process re-engineering.

Leadership is regarded as a critical factor in the initiation and implementation of the transformations in organizations. If leadership wants to engender a positive impact on individuals, teams, and organizations, both practitioners and researchers have argued that earlier leadership paradigms such as directive versus participative leadership, consideration versus initiating structure, auto-cratic versus democratic leadership, and task versus relations-oriented leadership should be broadened (see, for example, Avolio & Bass, 1995; Bass & Avolio, 1990; Conger, 1993; Ekvall & Arvonen, 1991, 1994; Puffer & McCarthy, 1996). With respect to the management of transformation processes in organizations, there is a strong need for leaders who are more change-centred. These leaders place value on the development of a clear vision and inspire followers to pursue the vision. In this way they provide a strong motivational force for change in followers. Anderson and King (1993) also concluded that besides a participative leadership style, a clear vision or mission is most likely to foster innovation. Leaders who enhance followers' confidence and skills to devise innovative responses, to be creative, and to take risks, can also facilitate the changeover processes in organizations (Howell & Avolio, 1989).

Resulting from this, a paradigm shift occurred in the past decade with the emergence of "new leadership" theories such as transformational and charismatic leadership (Bryman, 1992). Although the terms "charisma" and "transformational leadership" are often used interchangeably, Bass makes a distinction between them, with charisma forming a sub-dimension of transformational leadership (Bass, 1985; Bass & Avolio, 1993). As promoters of change, transformational leaders elicit performance beyond expectations by instilling pride, communicating personal respect, facilitating creative thinking, and providing inspiration.

Recently, the logic behind transformational leadership has begun to dissipate into the content and design of leadership development programmes (see, for example, Avolio & Bass, 1995; Avolio & Gibbons, 1988; Barling, Weber, & Kelloway, 1996; Bass & Avolio, 1990; McCauley & Hughes-James, 1994). One of the first steps of these programmes consists in identifying the transactional and transformational leadership qualities of the target leaders. To this end, prior to the actual training workshop, the MLQ is distributed to followers, who have to assess their leader. Considering the subsequent and costly training efforts it is crucial that the MLQ yields an accurate, fine-grained and unbiased profile of the leader on the various transactional and transformational leadership dimensions.

In this article we will first take a brief look at Bass' leadership model. A discussion of how leadership qualities are identified in transformational leadership development programmes will follow. Next, we focus on biases

which may occur in identifying leadership qualities. In particular, we investigate whether followers are able to differentiate between the various transformational leadership dimensions in their evaluations. In addition, we examine whether MLQ scores are biased by social desirability. Finally, we discuss possible explanations and implications of our findings.

TRANSACTIONAL VERSUS TRANSFORMATIONAL LEADERSHIP

Based on ideas originally proposed by Burns (1978), Bass (1985) distinguished between transactional leadership (TA) and transformational leadership (TF). In transactional leadership, leader-follower relationships are based on a series of exchanges or bargains between leaders and followers. These leaders can be effective to the extent that they clarify expectations and goals, but they generally neglect to focus on developing the long-term potential of followers. Bass (1985) identified two factors as composing transactional leadership. Leaders can transact with followers by rewarding effort contractually, telling them what to do to gain rewards, punishing undesired action, and giving extra feedback and promotions for good work. Such transactions are referred to as *contingent reward (CR) leadership.* Leaders can also transact with followers by intervening only when followers deviate from expectations, giving negative feedback for failure to meet standards. These transactions are referred to as *management-by-exception.* Based on the timing of the leader's interventions a distinction is often made between active and passive management-by-exception (Bass & Avolio, 1993; Hater & Bass, 1988). In passive management-by-exception (PM) leaders intervene only after standards are not met. In the more active form of management-by-exception (AM) leaders try to anticipate mistakes or problems.

Transformational leaders move beyond these simple exchange processes. They set challenging expectations and enable others to achieve higher levels of performance. Bass (1985) depicted transformational leadership as comprising four distinct factors: charisma, inspiration, individual consideration and intellectual stimulation. The first dimension, *charismatic leadership* (C) is shown by leaders who act as role models, create a sense of identification with a shared vision, and instill pride and faith in followers by overcoming obstacles. This dimension is also known as idealized influence. *Inspiration* (I) is defined as inspiring and empowering followers to enthusiastically accept and pursue challenging goals and a mission. *Individual consideration* (IC) consists of behaviours such as communicating personal respect to followers by giving them specialized attention, by treating each one individually, and by recognizing each one's unique needs. Finally, leaders who consider old problems in new ways, articulate these new ideas, and encourage followers to rethink their conventional practice and ideas are said to be *intellectually stimulating* (IS).

Besides these transactional and transformational leadership constructs, the multifactor leadership questionnaire (MLQ) developed by Bass and Avolio (1989a) also measures a non-leadership dimension. This non-leadership is known as *laissez-faire* (LF) leadership and reflects the absence of leadership and avoidance of intervention. There is no attempt to make agreements with followers, to motivate them, to set standards or to give feedback. In sum, as can be seen in Fig. 1, the MLQ claims to measure eight distinct leadership dimensions, which are grouped into three broader categories: transactional, transformational, and non-leadership.

A basic premise of this "full range" leadership model (see Avolio & Bass, 1991) is that transactional and transformational leadership are not viewed as opposite ends of a continuum. The same leader can display each of the full range of behaviours or styles (i.e. transactional, transformational and even *laissez-faire*). Thus, transformational leadership does not replace transactional leadership but adds to it by encouraging followers and colleagues to put in the extra effort. This augmentation theory has been confirmed again and again (Hater & Bass, 1988; Howell & Avolio, 1993; Yammarino, Spangler, & Bass, 1993). A recent meta-analysis illustrates that all components of transformational leadership behaviours are strongly correlated to both objective and subjective measures of performance (Lowe, Kroeck, & Sivasubramaniam, 1996).

IDENTIFICATION OF TRANSFORMATIONAL LEADERSHIP QUALITIES

Recently, leadership development programmes have begun to incorporate the philosophy behind the transformational leadership model (Avolio & Bass, 1991, 1995; Barling et al., 1996; Bass & Avolio, 1990; McCauley & Hughes-James, 1994; McElroy & Stark, 1992; Pile, 1989; Popper, Landau, & Gluskinos, 1992). Generally, these programmes are geared towards a more optimal and balanced use of the full range of leadership styles. In particular, the objective of training is often to move the target leader to exhibit more active transactional and transformational leadership components, relative to passive transactional and *laissez-faire* leadership.

The identification of leadership qualities is a basic ingredient of these transformational leadership development programmes. In order to identify the strengths and weaknesses of the target leaders, the MLQ is distributed to their followers or co-workers. These subordinates or colleagues have to judge the frequency with which leadership skills and actions are displayed by the target leaders. This survey, which is done on average a month prior to the actual training workshop, results in a base profile for each target leader (Avolio & Bass, 1991, 1995). Based on this MLQ profile, the leader generates personal ideas for self-improvement, derives learning objectives, and plans developmental coursework. For example, if MLQ scores indicate an overemphasis on passive

Transactional leadership (TA):

☑ Contingent reward (CR): 4 items
e.g. "The person I am rating works out agreements with me on what I will receive if I do what needs to be done".
☑ Active management-by-exception (AM): 4 items
e.g. "The person I am rating focuses attention on irregularities, mistakes, exceptions and deviations from what is expected of me."
☑ Passive management-by-exception (PM): 4 items
e.g. "Problems have to be chronic before the person I am rating will take action".

Transformational leadership (TF):

☑ Charisma (C): 12 items
e.g. "I am ready to trust the person I am rating to overcome any obstacle".
☑ Inspiration (I): 4 items
e.g. "In my mind the person I am rating is a symbol of success and accomplishment".
☑ Intellectual stimulation (IS): 4 items
e.g. "The person I am rating introduces new projects and new challenges".
☑ Individual consideration (IC): 4 items
e.g. "The person I am rating listens to my concerns".

Non-leadership:

☑ *Laissez-faire* (LF): 14 items
e.g. "The person I am rating avoids getting involved when important issues arise".

FIG. 1.   The MLQ leadership dimensions and sample items (Bass & Avolio, 1989a).

management-by-exception relative to individual consideration and intellectual stimulation, a leader could be trained to become more individually considerate through relevant role-plays and behavioural skill-building exercises. Creativity exercises may be used to foster intellectual stimulation. The MLQ profile is also used to formulate personal action plans at the end of the training workshop. These action plans may focus on a specific leadership component or on several leadership dimensions simultaneously (Avolio & Bass, 1991).

POTENTIAL BIAS IN THE MLQ

Because the MLQ plays a vital role in identifying the presence or absence of certain transformational leadership dimensions, it is important that it provides an accurate and unbiased measurement of the various transformational leadership dimensions. As a consequence, Bass and Avolio (1989b) suggest that more attention should be given to biases that might occur in identifying trans-formational leadership qualities. This article investigates two potential sources of bias.

First of all, MLQ ratings may be prone to halo effect. As already discussed, Bass (1985) originally conceptualized transformational leadership as comprising four sub-dimensions: intellectual stimulation, individual consideration, charisma, and inspiration. Nevertheless, this theoretical distinction may not hold in practice. When respondents have to identify their leader's strengths and weaknesses, they may have difficulty in differentiating between the various transformational behaviours and make more global ratings. In other words, followers may perceive the various transformational facets as relating to the same leadership domain (Bycio, Hackett, & Allen, 1995). Most previous studies support these contentions. For example, Tepper and Percy (1994) reported high correlations among all transformational leadership scales. Den Hartog, Van Muijen, and Koopman (1994) also found that all four transformational leader-ship scales were highly correlated. These scales clustered into one single factor, labelled "new leadership". Other studies found that only the charismatic and inspirational scales converged into one single construct (Howell & Avolio, 1989; Koh, 1990). Hater and Bass (1988), however, reported more positive findings, as all transformational factors emerged from the analyses. Recently, Bycio et al. (1995) concluded that although a model congruent with Bass' (1985) original conceptualization was tenable, there also existed high intercorrelations among all transformational leadership scales. If the MLQ captures merely a global transformational leadership dimension and the respondents are not able to make meaningful distinctions between the various transformational behaviours, practitioners should formulate the results of the survey feedback and development plans accordingly. This could imply that a differential MLQ profile (i.e. a profile composed of separate scores for the four transformational leader-ship dimensions) is not feasible. These important practical consequences call for further research on this issue.

Although most previous research may indicate that respondents do not maximally differentiate between transformational leadership behaviours in their evaluations, a different pattern is found for the transactional part of the MLQ. The transactional leadership scales are less related to each other and represent distinct leadership facets. The following three factors are often found: contingent reward, active management-by-exception, and passive management-by-exception (Hater & Bass, 1988; Howell & Avolio, 1993). Den Hartog et al. (1994) discovered the same three transactional factors, but their passive management-by-exception dimensions also converged highly with *laissez-faire* leadership. On the whole, these previous studies indicate that respondents are more able to differentiate between the various leader behaviours associated with the transactional styles. In other words, the three transactional leadership scales seem to tap more distinct leadership dimensions. Based on the results of previous research, the following hypotheses will be tested in this article:

Hypothesis 1: When the MLQ is used to identify leadership qualities, followers will perceive the various transformational leadership behaviours as being part of the same leadership domain. Therefore, ratings on the four transformational leadership dimensions will be highly correlated and converge into one single factor.

Hypothesis 2: When the MLQ is used to identify leadership qualities, followers will perceive the various transactional leadership behaviours as being different from each other. Therefore, ratings on the three transactional leadership dimensions will not be correlated and will tap distinct factors.

Concerns have also been raised that MLQ scores are biased by social desirability (Avolio, Bass, & Jung, 1995; Yukl & Van Fleet, 1991). It is argued that follower ratings of their respective leaders may not only reflect actual leader behaviour, but may also be influenced by social response bias. We speculate that the transformational leadership scales in particular could be subject to social desirability. People's prototypical views of a leader correlate more with ratings on transformational leadership scales than with transactional leadership ratings (Bass & Avolio, 1989b). Avolio & Bass (1995) reported that when people are asked to describe their "ideal" leader in behavioural terms, their list includes transformational rather than transactional behaviours. These studies show that respondents perceive the transformational leadership attributes as being more ideal and, thus, as more socially desirable. If social desirability bias (and not the actual leader behaviour) is responsible for high scores on the "transformational" leadership styles of the MLQ, the survey feedback results might hide important developmental needs. To the best of our knowledge the influence of social desirability bias on the identification and measurement of transformational

leadership dimensions has not been researched. In this article the following hypothesis will also be tested:

Hypothesis 3: When the MLQ is used to identify leadership qualities, MLQ ratings are subject to social desirability bias. Social desirability will be more correlated to the transformational leadership scales than to the transactional leadership scales.

METHOD

Sample and procedure

The sample consisted of 319 subjects from three organizations. The average age of the respondents was 38 years and 63% were male. On average the respondents had worked for their organization for six years. The business activities of the contributing organizations were very diverse, as one organization was commercial (i.e. food), one a bank, and one a local government organization. A neutral party (i.e. the researchers) distributed the questionnaires accompanied by a reference letter. The distribution of the surveys was part of a management development and change programme. The respondents received these materials in person, at work. They were asked to rate their immediate supervisor using the MLQ. After completion the respondents were requested to return the questionnaires anonymously. 189 subjects (59.2%) returned the questionnaires. This response rate was almost equal across the three organizations.

Questionnaires

We used a Dutch translation of the MLQ, version 8Y (see Den Hartog et al., 1994) as a measure of the "full" range of leadership styles and behaviours (i.e. transformational leadership, transactional leadership, and *laissez-faire* leadership). Fig. 1 (see page 421) shows sample items for each dimension measured. Respondents indicated how frequently their supervisor displayed the behaviour depicted in each item using a 5-point scale, where 5 = *frequently, if not always*, 4 = *fairly often*, 3 = *sometimes* 2 = *once in a while*, and 1= *not at all*. Besides the Dutch MLQ, a shortened version of the Marlowe Crowne Social Desirability Scale (Reynolds, 1982) was also used. Respondents were asked to indicate whether each of the 13 items was true or false. The internal consistency of this shortened version was .60. An example item is: "It is sometimes hard for me to go on with my work if I am not encouraged".
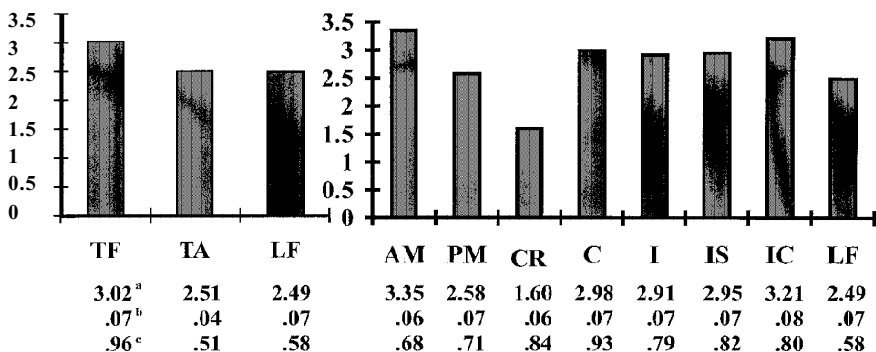
Analysis

In order to investigate hypotheses 1 and 2, correlations were computed among the various leadership sub-dimensions. Subsequently, an exploratory factor analysis (principal axis factoring, varimax rotation) was carried out to examine whether the dimensions of Bass' (1985) leadership model were measured by the

MLQ. Hypothesis 3 was investigated by correlating the MLQ scores (for each leadership dimension) with total scores on the short version of the Marlowe Crowne Social Desirability Scale.

RESULTS

Before turning to our hypotheses, we report how the respondents rated their immediate supervisors. Fig. 2 presents graphical representations of the MLQ profile averaged over all respondents. This figure gives an interesting, although broadly grained, picture of the frequency with which each of the three leadership styles (first graphic) and their various sub-dimensions (second graphic) are exhibited in the organizations.

Regarding the three main leadership styles, transformational leadership was displayed most frequently (3.02), followed by transactional leadership (2.51) and *laissez-faire* leadership (2.49). With regard to the sub-dimensions of transactional leadership (i.e. contingent reward, active management-by-exception, and passive management-by-exception), and transformational leadership (i.e. charisma, inspiration, individual consideration, and intellectual stimulation), the second graphic shows that active management-by-exception is exhibited most frequently (3.35), followed by individual consideration (3.21). Avolio and Bass (1995, p. 15) state that an optimal and balanced MLQ profile implies 3.0 or

	TF	TA	LF		AM	PM	CR	C	I	IS	IC	LF
	3.02 [a]	2.51	2.49		3.35	2.58	1.60	2.98	2.91	2.95	3.21	2.49
	.07 [b]	.04	.07		.06	.07	.06	.07	.07	.07	.08	.07
	.96 [c]	.51	.58		.68	.71	.84	.93	.79	.82	.80	.58

[a]Mean of scale
[b]Standard deviation of scale
[c]Cronbach's coefficient alpha

TF = Transformational leadership; TA = Transactional leadership; CR = Contingent reward; AM = Active management-by-exception; PM = Passive management-by-exception; C = Charisma; I = Inspiration; IS = Intellectual stimulation; IC = Individual consideration; LF = *Laissez faire*.

FIG. 2. Graphical representation of descriptive statistics for the three broad leadership dimensions and the various sub-dimensions.

higher on the transformational components, 2.0 or lower on transactional leadership, and 1.0 or lower on *laissez-faire* leadership. Although the observed frequencies of the leadership styles in the organizations conform rather closely to these "norms", the relatively high frequency of *laissez-faire* leadership and passive management-by-exception is striking. These broadly-based[1] results suggest that it would be worthwhile to train the supervisors to exhibit less *laissez-faire* and passive transactional leadership behaviours and increase the proactive transactional (e.g. contingent reward) and transformational leadership components.

The first hypothesis predicted that ratings on the four transformational leadership dimensions would be highly correlated. In addition, we hypothesized that ratings on the three transactional leadership dimensions would not be correlated. Table 1 shows the correlation matrix of the various leadership dimensions as measured by the MLQ. It is noteworthy that the mean inter-correlation of the four sub-dimensions of transformational leadership equals .81. Thus, although Bass (1985) claims that these sub-dimensions are distinct conceptual factors, these results show that they are all strongly positively correlated, supporting Hypothesis 1. The mean intercorrelation of the three transactional factors is –.06. These findings are in line with Hypothesis 2. Another interesting aspect is that *laissez-faire* leadership and passive management-by-exception correlate positively with each other (.65) and negatively with all other dimensions.

TABLE 1
Correlations Between Various Leadership Dimensions

	CR	AM	PM	C	I	IS	IC	LF
CR	1.0							
AM	.20**	1.0						
PM	–.12	–.28***	1.0					
C	.34***	.42***	–.59***	1.0				
I	.34***	.31***	–.60***	.88***	1.0			
IS	.34***	.36***	–.55***	.86***	.80***	1.0		
IC	.26***	.37***	–.62***	.79***	.74***	.76***	1.0	
LF	–.10	–.31***	.65***	–.61***	–.62***	–.55***	–.52***	1.0

**p < .01, ***p < .001.
CR = Contingent reward; AM = Active management-by-exception; PM = Passive management-by-exception; C = Charisma; I = Inspiration; IS = Intellectual stimulation; IC = Individual consideration; LF = *Laissez faire*.

[1]The MLQ profile shown in Fig. 2. is a global MLQ profile which is based on ratings of all subjects for all supervisors. Similar profiles and interpretations are possible at the individual, team, or organizational level.

To investigate Hypotheses 1 and 2 more conclusively, an exploratory factor analysis was carried out. Seven factors emerged, accounting for 58% of the total variance. Only four factors had eigenvalues of one or greater (Kaiser, 1958). This four-factor solution was also selected for further study because it had sufficient factor loadings (i.e. item-factor correlations) to be interpretable, and was conceptually meaningful. These four factors accounted respectively for 38, 6, 5, and 3% of the total variance. Factors were named according to the content of items with factor loadings above .30. Items comprising these factors with loadings are presented in Table 2. Ten items were dropped because they failed to fulfil the selection criteria[2].

Factor 1 consisted of 18 items. Nine of these items were classified as belonging to Bass' charisma scale. Four of them were intellectual stimulation items, three were individual consideration items, and two originally belonged to

TABLE 2
Four-factor Solution with Item Loadings

FACTOR 1		FACTOR 2		FACTOR 3		FACTOR 4	
Transformational Leadership		Contingent Reward		Active Management-by-Exception		Passive Leadership	
Item #	Loading	Item #	Loading	Item #	Loading	Item #	Loading
1	.66	6	.78	7	.49	8	−.51
9	.62	12	.69	14	.53	13	−.52
10	.74	25	.75	20	.62	15	−.56
11	.60	29	.76	30	.73	21	−.48
16	.67						
17	.79						
18	.67						
23	.66						
28	.72						
31	.63						
32	.79						
33	.79						
34	.78						
36	.62						
37	.70						
38	.84						
39	.87						
40	.79						

[2]Criteria for selecting items in the current study were (1) presence of factor loadings above .30, and (2) difference between factor loadings of an item on two factors above .20. Items that did not meet these criteria were dropped. This procedure is similar to that used by Den Hartog et al. (1994).

inspiration. Because these 18 items were all items of Bass' sub-dimensions of transformational leadership, Factor 1 was labelled "transformational leadership". Factor 2 consisted of four items which conformed completely to Bass' contingent reward scale. Factor 3 contained four items and represented perfectly Bass' active management-by-exception scale. Finally, Factor 4 was composed of four items. This factor led to a title of "passive leadership" because it contained both items of Bass' passive management-by-exception scale and the *laissez-faire* scale. Overall, these factor analytic findings give further support for the first two hypotheses, as all transformational leadership dimensions cluster into one single factor, as opposed to the distinct transactional dimensions.

Hypothesis 3 addressed whether MLQ ratings were subject to social desirability bias. We hypothesized MLQ ratings would be subject to social desirability bias, especially for the ratings on the transformational leadership scales. Table 3 shows the correlations between the four factors and social desirability. Though significant, these correlations are relatively small. The highest correlation found (.17) was that between transformational leadership and social desirability. Nevertheless, social desirability does not seem to be a real threat, as the transformational leadership scale and social desirability biases only share 2.89% of common variance. There exists a significant negative correlation between the passive leadership factor and social desirability (–.18). On the whole, these findings do *not* support Hypothesis 3.

DISCUSSION AND CONCLUSIONS

New leadership theories such as transformational leadership provide answers to the competitive challenges and innovations faced by organizations. Transformational leaders can facilitate these changeover processes by placing value on the development of a vision and by inspiring followers to pursue that vision. Consequently, organizations have begun to incorporate the philosophy behind the transformational leadership model into their management development programmes. One of the first steps in transformational leadership development consists in identifying leadership qualities. To this end, the MLQ is distributed to followers to identify the gamut of leadership styles displayed by leaders on-the-job. For the organization it is vital that the MLQ yields an accurate and unbiased

TABLE 3
Correlations Between Leadership
Factors and Social Desirability

Transformational leadership	.17**
Contingent reward	–.03
Active management-by-exception	.05
Passive leadership	–.18**

$**p < .01$

assessment of leaders on the various leadership dimensions. This article focused on two sources of bias which may occur in identifying leadership qualities. In particular, MLQ ratings could be prone to halo effect and social desirability bias.

The results of this study provided evidence for the first hypothesis. The four transformational leadership scales, namely charisma, inspiration, individual consideration, and intellectual stimulation, were all highly intercorrelated and clustered into one single factor. In other words, based on these results, the MLQ is only able to measure a global transformational leadership dimension and fails to discriminate among the four sub-dimensions of transformational leadership. These results do not support Bass' (1985) conceptualization of transformational leadership but converge to the previous findings of Den Hartog et al. (1994) and Tepper and Percy (1994).

In this article we postulated that a halo effect is responsible for the high intercorrelations among the four transformational leadership scales. Followers would not be able to maximally differentiate between the various transformational leadership behaviours, as they perceive them as belonging to the same leadership domain. There are two alternative explanations for our results. First of all, the high intercorrelation among the various transformational leadership scales could simply reflect real leadership patterns. This would imply that followers accurately rate their leaders but that those leaders perform homogeneously on the various transformational leadership dimensions. Second, it is possible that these various sub-dimensions are conceptually closely related to each other, making it almost impossible to observe their unique effects. This would also imply that it is very difficult to develop behavioural operationalizations of the four sub-dimensions which differ significantly from each other (see Koopman, 1991). Future experimental studies (e.g. using videotapes of leaders whose leadership scores are known a priori) are needed to disentangle these alternative explanations.

Our second hypothesis was also supported. As opposed to the four transformational leadership scales, the two transactional scales (i.e. active management-by-exception and contingent reward) seemed to measure distinct leadership aspects because they had low correlations with the other factors. The last transactional leadership dimension, namely passive management-by-exception, was found to correlate with *laissez-faire* leadership. These two scales formed one single factor which we labelled "passive leadership". A similar factor was reported by Den Hartog et al. (1994) and Yammarino and Bass (1990).

We did not find support for our third hypothesis. Results of this study showed that social desirability did not seem to be a real threat to the internal validity of leadership questionnaires such as the MLQ. We found significant positive correlations between transformational leadership and social desirability and significant negative correlations between passive leadership and social desirability. This implies that high scores on transformational leadership are also partly based on the fact that this is a somewhat more socially desirable leadership

style. The reverse is true for passive leadership. Both of these correlations, however, were small. Our results converge to recent meta-analytic results in the domain of personality testing which show that social desirability is not as pervasive as thought by many work and organizational psychologists (Ones, Viswesvaran, & Reiss, 1996). Future research should investigate other biases which could blur the identification and measurement of transformational leadership qualities. For example, the impact of the leadership theories that respondents "carry in their heads" on new leadership ratings should be studied. Implicit leadership theories have been shown to exert considerable influence on ratings of more traditional leadership dimensions (Lord & Maher, 1991).

Our results highlight that the measurement of new leadership components remains a controversial issue (Conger & Kanungo, 1994). Therefore, researchers should continue to search for alternative behavioural items for the new leadership dimensions (Avolio et al., 1995). Recently, some steps have been undertaken in this direction. For example, Conger and Kanungo (1994) developed a questionnaire measure for six perceived behavioural dimensions of charismatic leadership: vision and articulation, environmental sensitivity, unconventional behaviour, sensitivity to member needs, personal risk, and not maintaining status quo. Similarly, Bommer's (1996) Transformational Leadership Inventory is based on different behavioural operationalizations of transformational leadership components. Future research is needed to investigate nomological relationships between the various questionnaires of new leadership dimensions.

Do our findings imply that we advise practitioners and researchers to stop using the MLQ and explore alternative ways of identifying leadership qualities? On the one hand we believe such advice is unwarranted. As discussed, the MLQ profile is a vital instrument in transformational leadership development. Based on our results, the MLQ provides practitioners with a relatively unbiased assessment of the frequency with which leaders exhibit behaviours related to four distinct leadership factors: transformational leadership, contingent reward, active management-by-exception, and passive leadership. Thus, the MLQ profile can provide a starting point for recommending changes in the leader's strategy for working with his or her followers on these four dimensions. Similarly, developmental coursework and personal action plans can be centred around these four factors. On the other hand, it is important for both practitioners and researchers to be aware of some limitations inherent in the MLQ results. In particular, the MLQ does not provide them with a distinct and more fine-grained picture of the various transformational leadership components. In order to sidestep these shortcomings, we recommend that relevant leadership qualities are identified through a combination of different methods. For example, results of questionnaire measures such as the MLQ could be integrated with information gathered through the systematic observation of leader behaviour. Acquiring the base profile via assessment-centre exercises or personality questionnaires (see McCauley & Hughes-James, 1994) is yet another possibility. A last piece of

practical advice suggests administering the MLQ to multiple raters (e.g. col-
leagues, supervisors, subordinates) and comparing the respective results. In our
study we only surveyed the followers of the leaders. Both researchers and work
and organizational psychologists can explore the viability of (the combination of)
alternatives proposed here.

REFERENCES

Anderson, N., & King, N. (1993). Innovation in organizations. In C.L. Cooper & I.T. Robertson (Eds.), *International Review of Industrial and Organizational* Psychology (pp. 1–34). Chichester: Wiley.

Avolio, B.J., & Bass, B.M. (1991). *The full range of leadership development.* Binghamton, NY: Bass, Avolio & Associates.

Avolio B.J., & Bass, B.M. (1995). *You can bring a horse to water, but you can't make it drink: Evaluating a full range leadership model for training and development.* New York: Center for Leadership Studies, Binghamton University, State University of New York.

Avolio, B.J., Bass, B.M., & Jung, D.I. (1995). *Construct validation and norms for the multifactor leadership questionnaire (MLQ-Form* 5X*).* New York: Center for leadership studies, Binghamton University, State University of New York.

Avolio, B.J., & Gibbons, T. (1988). Developing transformational leaders: A lifespan approach. In J.A. Conger & R.N. Kanungo (Eds.), *Charismatic leadership: The elusive factor in organizational effectiveness*. San Fransisco: Jossey-Bass.

Barling, J., Weber, T., & Kelloway, E.K. (1996). Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *Journal of Applied Psychology*, *81*, 82–38.

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

Bass, B.M., & Avolio, B.J. (1989a). *Manual for the multifactor leadership questionnaire.* Palo Alto, CA: Consulting Psychologists Press.

Bass, B.M., & Avolio, B.J. (1989b). Potential biases in leadership measures: How prototypes, leniency, and general satisfaction relate to ratings and rankings of transformational and transactional leadership constructs. *Educational and Psychological Measurement*, *49*, 505–527.

Bass, B.M., & Avolio B.J. (1990). The implications of transactional and transformational leadership for individual, team, and organizational development. *Research in Organizational Change and Development*, *4*, 231–272.

Bass, B.M., & Avolio, B.J. (1993). Transformational leadership: A response to critiques. In M.M. Chemers & R. Ayman (Eds.), *Leadership theory and research: Perspectives and direction* (pp. 49–88). San Diego, CA: Academic Press.

Bommer, W.H. (1996). *An assessment of the transformational leadership inventory (TLI).* Paper presented at the 55th Annual Meeting of Academy of Management, Cincinatti, OH.

Bryman, A. (1992). *Charisma and leadership in organizations.* London: Sage.

Burns, J.M. (1978). *Leadership.* New York: Harper & Row.

Bycio P., Hackett, R.D., & Allen, J.S. (1995). Further assessment of Bass's (1985) conceptualization of transactional and transformational leadership. *Journal of Applied Psychology*, *80*, 468–478.

Conger, J.A. (1993). The brave new world of leadership training. *Organizational Dynamics*, *21*, 46–58.

Conger, J.A., & Kanungo, R.N. (1994). Charismatic leadership in organizations: Perceived behavioral attributes and their measurement. *Journal of Organizational Behavior*, *15,* 439–452.

Den Hartog, D., van Muijen, J. & Koopman, P.L. (1994). Transactioneel versus transformationeel leiderschap, een analyse van de MLQ in de Nederlandse situatie. [Transactional versus transformational leadership, an analysis of the MLQ in a Dutch situation]. *Gedrag en Organisatie*, *7*, 155–166.

Ekvall, G., & Arvonen, J. (1991). Change-centered leadership: An extension of the two-dimensional model. *Scandinavian Journal of Management*, *7*, 17–26.

Ekvall, G., & Arvonen, J. (1994). Leadership profiles, situation and effectiveness. *Creativity and Innovation Management, 3*, 139–161.

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

Howell, J.M., & Avolio, B.J. (1989). *Transformational versus transactional leadership: How they impact innovation, risk-taking, organization structure and performance*. Paper presented at the National Meeting of the Academy of Management, Washington, DC.

Howell, J.M., & Avolio, B.J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated business unit performance. *Journal of Applied Psychology*, *78*, 891–902.

Kaiser, H.F. (1958). The varimax criterion for analytic rotations in factor analysis. *Psychometrika*, *23*, 187–200.

Koh, W. (1990). *An empirical validation of the theory of transformational leadership in secondary schools in Singapore*. Unpublished doctoral dissertation, University of Oregon.

Koopman, P.L. (1991). Charismatisch leiderschap, motivatie en prestatie. [Charismatic leadership, motivation and performance]. *Gedrag en Organisatie*, *5*, 357–369.

Lord, R.G., & Maher, K.J. (1991). Leadership and information processing: Linking perceptions and performance. Boston, MA: Unwin Hyman.

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

McCauley, C.D., & Hughes-James, M. (1994). *An evaluation of the outcome of a leadership development program*. Greensboro, NC: Center for Creative Leadership.

McElroy, J.C., & Stark, E. (1992). A thematic approach to leadership training. *Journal of Managerial Issues*, *4*, 241–253.

Ones, D.S., Viswesvaran, C., & Reiss, A.D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, *81*, 660–679.

Pile, S. (1989). *Visionary leadership: Creating a generative map about behavior, belief and identity*. Unpublished MA thesis, Pepperdine University.

Popper, M., Landau, O., & Gluskinos, U.M. (1992). The Israeli defence forces: An example of transformational leadership. *Leadership and Organization Development Journal*, *13*, 3–8.

Puffer, S.M., & McCarthy, D.J. (1996). A framework for leadership in a TQM context. *Journal of Quality Management*, *1*, 109–130.

Reynolds, W.M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne social desirability scale. *Journal of Clinical Psychology*, *38*, 119–125.

Tepper, B.J., & Percy, P.M. (1994). Structural validity of the multifactor leadership questionnaire. *Educational and Psychological Measurement*, *54*, 734–744.

Yammarino, F.J., & Bass, B.M. (1990). Long-term forecasting of transformational leadership and its effects among naval officers: Some preliminary findings. In K.E. Clark & M.B. Clark (Eds.), *Measures of leadership* (pp. 151–171). West Orange, NJ: Leadership Library of America.

Yammarino, F.J., Spangler, W.D., & Bass, B.M. (1993). Transformational leadership and performance: A longitudinal investigation. *Leadership Quarterly*, *4*, 81–102.

Yukl, G.A., & Van Fleet, D.D. (1991). Theory and research on leadership in organizations. In M.D. Dunette & L.M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology* (Vol. 2, pp. 147–197). Palo Alto, CA: Consulting Psychologists Press Inc.