Journal of Occupational and Organizational Psychology (2001), **74**, 1–27 *Printed in Great Britain*

The development of a new Transformational Leadership Questionnaire

Beverly Alimo-Metcalfe*

University of Leeds, Nuffield Institute Centre for Leadership and Management, Leeds, UK

Robert J. Alban-Metcalfe

Trinity and All Saints' University College, Leeds, UK

This study sought to investigate the characteristics of 'nearby' leaders by eliciting the constructs of male and female top, senior, and middle-level managers and professionals working in organizations in two large UK public sectors (local government and the National Health Service).

An instrument, the Transformational Leadership Questionnaire (TLQ-LGV), was developed and piloted on a national sample of 1464 managers working for local government organizations. Analysis of the data, presented here, revealed the existence of nine highly robust scales with high reliabilities ($\alpha \geq .85$) and with convergent validity (range $r = .46$ to $.85$). These findings are discussed, together with suggestions for subsequent research.

While the formal and empirical study of leadership began around the 1930s (for reviews see, Hunt, 1996; Rosenbach & Taylor, 1993; Wright, 1996), the early 1980s witnessed a major paradigm shift in approaches to leadership, from 'transactional' to 'transformational'. Earlier approaches, such as the situational or contingency models of scholars including Fiedler (1967), Vroom and Yetton (1973), and Yukl (1989), focused on identifying the behaviours or styles which appeared to predict effective outcomes depending on various situational contingencies. These were variously adopted by organizations and researchers to enable organizations to deal with complexity, and to become more efficient and effective. However, they offered little advice for dealing with the turmoil of the late 1970s and 1980s, when 'constant change' became the norm. It was in this climate that the 'New Leadership' approach emerged (Bryman, 1992), which encompassed: 'visionary' (Sashkin, 1988), 'charismatic' (Conger, 1989; Conger & Kanungo, 1988; House, 1977), or 'transformational' models (Bass, 1985; Tichy & Devanna, 1986) (see Bryman, 1996, for a review).

*Requests for reprints should be addressed to Dr Beverly Alimo-Metcalfe, Nuffield Institute Centre for Leadership and Management, University of Leeds, 71–74 Clarendon Road, Leeds LS2 9PL, UK (e-mail: b.m.alimo-metcalfe@leeds.ac.uk).

One of the first comparisons between models of transactional and transformational leadership was articulated not by a psychologist, but by a political scientist—James McGregor Burns (1978), who developed his model based on Weber's (1947) seminal work on charismatic leaders. Burns described some politicians as characterized as 'heroic' (he believed that the term *charisma* had lost its meaning), in that 'leaders and followers raise one another to higher levels of morality and motivation'. He believed that by engaging the followers' higher needs, transformational leaders move followers beyond their self-interest to work for the greater good and, that as they do so, they become self-actualizing and become leaders themselves. Burns contrasted such individuals with the type of politician who trades promises for votes, that is, they influence followers by transactions of exchange: 'Pay, status, and similar kinds of rewards are exchanged for work effort and the values emphasized are those related to the exchange process'. US leadership scholar, Bernard Bass (1985) built on Burns' notions of leadership and corrected a fundamental error in Burns' theory, namely, Burns' assertion that transformational and transactional leadership are at opposite ends of a single continuum of leadership. On the basis of research using the Multifactor Leadership Questionnaire (MLQ), devised by Bass and his co-researcher, Bruce Avolio (Bass & Avolio, 1990*a*, *b*), Bass found the two approaches to be independent and complementary. Bass asserts that transactional leadership entails an exchange between leader and follower in which the leader rewards the follower for specific behaviours, and for performance that meets with the leader's wishes, and criticizes, sanctions or punishes non-conformity or lack of achievement. Rewards may be tangible, such as financial 'perks' and incentives, or non-tangible, such as prestige. Such exchanges cater to the self-interest of followers (Bass, 1998*a*). Zaleznik (1993) refers to transactional leaders as managers, and states that they 'concentrate on compromise, intrigue, and control. They focus on the process, not the substance, of the issues. They are often seen as inflexible, detached and manipulative.'

Bass (1998*a*) cited evidence from a range of studies, conducted across the world, that transformational leadership has a strong positive relationship with a range of outcome variables, including objective measures of organizational productivity, as well as subjective evaluations, which include greater job satisfaction and commitment, and lower levels of stress. Bass (e.g. 1997, 1998*a*, *b*) cites an extensive range of studies, from almost every continent and a range of sectors, including industrial, military, educational, health care, and voluntary agencies, to support the validity of the instrument.

In recent studies of leadership, a large number of researchers have adopted the MLQ. The MLQ measures the 'full range' of leadership styles and behaviours, which comprise (in earlier interpretations) four transformational components: *idealized influence*: transformational leaders behave in ways that result in them being admired, respected and trusted, such that their followers wish to emulate them. They are extraordinarily capable, persistent, and determined; *inspirational motivation*: transformational leaders behave such that they motivate and inspire those around them by providing meaning, optimism and enthusiasm for a vision of a future state; *intellectual stimulation*: transformational leaders encourage followers to question assumptions, reframe problems, and approach old solutions in new ways, and to be

creative and innovative. At times, their followers' ideas may differ from those of the leader, who may solicit or encourage such responses; *individualized consideration*: transformational leaders actively develop the potential of their followers by creating new opportunities for development, coaching, mentoring, and paying attention to each follower's needs and desires. They know their staff well, as a result of listening, communicating, and 'walking around' encouraging, rather than monitoring their efforts. Bass later combined idealized influence and inspirational motivation into a single *charismatic-inspirational* dimension (e.g. Bass, 1998*b*).

The two transactional components comprise: *contingent reward*, whereby approved follower actions are rewarded and disapproved actions are punished or sanctioned; *management by exception* (active) and *management by exception* (passive), which are corrective transactional dimensions. The former involves a monitoring of performance, and intervention when judged appropriate; the latter reflects correction only when problems emerge. In addition, there is *laissez-faire*, an approach that is, in fact, an abrogation of leadership, since there is an absence of any transaction. This approach is deemed to be the most ineffective (e.g. Bass, 1998*b*).

Meta-analyses conducted independently by Gasper (1992), Lowe, Kroeck, and Sivasubramaniam (1996), and Patterson, Fuller, Kester, and Stringer (1995) have confirmed significant correlations of MLQ transformational components with effectiveness, with satisfaction, and with the extra effort perceived by the followers (Bass, 1998*b*), in various public (including military) and private sector organizations, in the direction predicted. Indeed, the MLQ can be regarded as providing a model for assessing transformational leadership, as articulated in the dominant US approach.

Two recent non-US studies have investigated the construct and discriminant validity of the MLQ. A Dutch study, undertaken by Den Hartog, Van Muijen, and Koopman (1997) sought to test the factor structure of the MLQ, using a Dutch translation of the instrument. They reported finding a structure comprising a transformational, a transactional, and a *laissez-faire* factor, but not separate dimensions of transformational and transactional leadership.

Citing a paper by Bycio, Hackett, and Allen (1995), which asserted the lack of construct validity of the MLQ, Carless (1998) undertook an Australian study to investigate the discriminant validity of transformational leadership behaviour, as measured by the instrument. Employing only the items in the MLQ designed to measure transformational leadership, she conducted confirmatory factor analysis of the data. On the basis of goodness-of-fit statistics to test various models, she concluded that the subscales of the MLQ (Form-5X) were highly correlated, with a high proportion of the variance of the subscales explicable by a higher-order construct, and thus, that 'there is little evidence to justify interpretation of the individual subscale scores'.

The need for a new UK instrument to measure Transformational Leadership

While recognizing and valuing the ground-breaking research of Bass and co-workers, and the wealth of other US studies, the present authors were interested in

whether dimensions of transformational leadership which have emerged from North American studies, are similar to those found in UK organizations, particularly those in the public sector. The issue of the generalizability of US approaches to leadership has also been raised by other researchers, including North American writers (e.g. Adler, 1983*a*, *b*; Erez, 1990; Hunt & Peterson, 1997; Smith & Bond, 1993; Smith, Misumi, Tayeb, Peterson, & Bond, 1989; Smith & Peterson, 1988; Triandis, 1990, 1993).

Also, US research on the new transformational paradigm, has emerged from observations of top managers in organizations, rather than middle and lower level managers (Bryman, 1996). This contrasts with earlier leadership research, such as the Ohio State studies of the 1950s and 1960s, which focused on the styles of lower-level managers and supervisors. Bass (1997), for example, reported his initial assumption, that transformational leadership was limited to the upper echelons of organizations, led him to collect the first interview and survey data 'from and about senior executives and US Army colonels describing their leaders'. He subsequently found evidence of transformational leadership at every level in organizations, formal and informal, including, for example, among 'housewives active in the community'.

It is, perhaps, worthy of comment that since leadership, particularly the 'new leadership model', is seen primarily as a social influence process (e.g. Bass, 1985, 1998*a*, *b*; Bass & Avolio, 1994; Bryman, 1992, 1996; Hogan, Curphy, & Hogan, 1994; Parry, 1998; Yukl, 1994), that some of the new leadership models have been based on data collected by researchers interviewing chief executives and senior managers, rather than data collected directly from the subordinates of managers.

Studies based on researchers' views can, of course, provide valuable insights into leadership. However, it is important to distinguish between:

(1) the models of leadership which have evolved from data collected as a result of researchers interviewing top managers;
(2) studies based on eliciting the perceptions of managers, at all levels, construing managers at the top level (i.e. 'distant' leadership); and
(3) studies based on eliciting the perceptions of managers, at all levels, construing their immediate supervisor (i.e. 'close/nearby' leadership).

The distinction between 'distant' and 'close/nearby' leadership is particularly important. Without making it perfectly clear what is the exact nature of the focus, and the method of collecting, the data collecting on notions of leadership, there is a serious danger of confounding our understanding of the phenomenon. The literature on social distance and leadership serves to emphasize this point.

Leadership and social distance

The relationship between leadership and social distance is important in the light of evidence from Shamir (1995) that different characteristics were ascribed to 'distant' as opposed to 'close/nearby' leaders, with the former being described as possessing a more ideological orientation and a strong sense of mission, which they expressed with rhetoric, courageously, and with little concern for personal criticism or

sanction. There are, perhaps, echoes here of the earlier 'Great man' notions of leadership. In contrast, 'nearby' or 'close' leaders were seen as, 'sociable, open and considerate of others, having a sense of humour, having a high level of expertise in their field, being dynamic and active', and as 'having an impressive physical appearance, being intelligent or wise'; they were also seen as 'setting high performance standards for themselves and their followers, and being original or unconventional in their behaviour'.

It should be noted, however, that Shamir's subjects were Israeli university students, as opposed to adults working in organizations, with the majority of the 'distant' leaders being political figures, spiritual or religious leaders, and military personnel. Most of the 'close' leaders were teachers and lecturers, military persons encountered during compulsory military service, and peers, classmates and friends. They were, therefore, somewhat atypical of those individuals typically involved in organizational studies of leadership. Nevertheless, social distance is likely to be a significant variable in perceptions of leadership, and may account for some of the particular conceptions of leadership in the US literature.

Thus, characteristics such as 'visionary', 'charismatic' or 'transformational', which are the central theme in most of the US approaches, are similar to those of Shamir's 'distant' leaders. The most recent validation studies of transformational leadership, as operationalized in the MLQ, identified one over-arching transformational factor of 'inspirational leadership' (Den Hartog *et al.*, 1997), or 'charisma' (Carless, 1998).

The importance of social distance in relation to the attribution of 'charisma' in leaders has been a subject of debate. For some (e.g. Katz & Kahn, 1978), social distance is a necessary condition for the attribution of charisma, since proximity might reveal their frailties, with their subordinates being unable to build 'an aura of magic about them'. On the other hand, Bass (1998*a*, *b*) maintains that since charisma is a product of interpersonal relationships and can be attributed by an individual to their immediate supervisor, it is not the monopoly of top leaders in an organization.

Given the prominence and importance of the assocation between 'charisma', and being 'visionary' and 'inspirational', to the concept of transformational leadership in the existing leadership literature, and the debate relating to social distance, our investigation was designed such that it illuminated how 'nearby' transformational leadership is perceived in the UK.

Research methodologies

A further concern of some leadership researchers has been the relative paucity of studies that adopt qualitative techniques. This is somewhat anomalous, given that leadership can be conceptualized as a social influence process (Parry, 1998), and that 'leadership is about transformation . . . in the motivations, values, and beliefs of followers' (Rost, 1993).

Parry pointed, in particular, to the value of Grounded Theory, which he described as 'a research method in which theory emerges from, and is grounded in,

the data'. He also argued for complementarity, rather than competition between qualitative and quantitative methods. Such a combination of methods was adopted in the present study.

The present study also redressed the gender imbalance of earlier studies in relation to the subjects from whom constructs of leadership were elicited, and upon whose notions of leadership an instrument was developed. This was achieved by including a substantial proportion of women as well as men in the sample from whom constructs of leadership were elicited, and in the population among whom the resulting questionnaire was piloted.

Present investigation

Thus, the current research study was intended:

1. to investigate the constructs of 'nearby/close' leadership held by men and women at different levels (middle, senior, top) in two major parts of the UK public sector (local government and the National Health Service) in relation to managers or colleagues with whom they currently work, or have worked, whom they regard as showing outstanding leadership characteristics;
2. to inspect the constructs that emerge and to content analyse the constructs in terms of consistent themes or groupings;
3. to use the emergent groupings of constructs as the basis of a pilot questionnaire to be distributed to a range of middle to top managers within a national random, stratified sample of organizations in one part of the UK public sector (local government);
4. to analyse the factorial structure of responses to the pilot questionnaire, in order to devise a questionnaire that measures transformational leadership.

Following analysis of the constructs that emerged, in terms of themes and groupings (stage 2 above), 48 groups were identified. Using the process of analysis, comparison and discussion, described earlier, nine 'high-order' clusters were proposed. These were given the following descriptions: A—*Political Skills, Managing External Environment*; B—*Empowering, Delegating*; C—*Inspiration, Respected/Generates Loyalty*; D—*Visionary, Clear Strategic Plan/Conviction*; E—*Personal Qualities*; F—*Integrity, Consistency of Behaviour, Values*; G—*Intellectual Capacity, Ability to See Big Picture*; H—*Supports Staff, Knows What Motivates Staff, Listens/Empathic*; I—*Encourages Critical Thinking*.

The researchers were conscious of the oppositely-valent needs: (1) to try, consistent with the Grounded Theory approach adopted, not to impose a structure on the emergent data, and at the same time (2) to ensure the content validity of the Pilot Questionnaire, consistent with the existing literature on transformational leadership. Thus, while the nature and content of the nine clusters were judged to reflect different aspects of transformational leadership, as reflected in the writings of Burns, House, Conger and Kanungo, Tichy and Devanna, Sashkin, and Bass and Avolio (cited above), no single model or combination of models was imposed.

Thus, in proposing the tentative hypothesis that, following principal components analysis, each of the nine 'high-order' clusters would correspond to an emergent

Table 1. Composition of sample from whom constructs were elicited, by sector, sex and level in their organization

	Local government		National Health Service		Total	
Level	Female	Male	Female	Male	Female	Male
Chief Executive	6	5	1	3	7	8
Director	2	8	11	8	13	16
Assistant Director	5	6	8	9	13	15
Middle Manager	9	2	6	3	15	5
Sub-total	22	21	26	23	48	44
Total	43		49		92	

factor, an attempt was made to propose a working hypothesis, while not forcing closure on any factorial structure that might emerge. This approach can be seen to be similar to that adopted by Den Hartog *et al.* (1999) in their 'emic' and 'etic' (Berry, 1969) international study of charismatic/transformational leadership.

Method

Devising the pilot instrument

Sample. The total sample comprised managers in two major parts of the UK public sector, namely, local government and the National Health Service (NHS).

(i) Local government sample. Staff from a total of 11 local authorities participated in the research. The criteria for selection of organizations within local government were that they should provide a representative sample, to reflect a range of geographical locations (eight authorities in England, two in Wales), and a range in terms of size and type of authority. Furthermore, given that the explicit intention of the research was to investigate notions of transformational leadership, the decision was taken to adopt a 'purposive' sampling technique. Accordingly, the further selection criterion was that the Chief Executive was regarded by members of the Local Government Management Board (LGMB) Advisory Steering Group as having a transformational style of leadership qualities, and seen as unusually innovative and successful in handling change and delivering high standards of service delivery.

In each authority, four members of the staff were interviewed, using the Repertory Grid technique, described below: the Chief Executive and one manager from each of the next three 'levels' in the organization. Each interview casted between 1–1½ hours. In total, 21 male and 22 female managers were interviewed (Table 1).

(ii) National Health Service sample. The same kind of interview was also conducted with a total of 56 managers at different levels (middle, senior, top) working in the NHS. The decision to elicit constructs from this source was that the NHS can be seen to have had to tackle some of the recent changes affecting local government organizations. In order to increase the robustness of the resulting instrument, it was judged valuable to incorporate NHS managers' and doctors' constructs so as additionally to incorporate their perceptions of leadership.

Repertory Grid technique. For all interviews, a form of Repertory Grid technique (Alban-Metcalfe, 1997; Kelly, 1955) was used. Under conditions that ensured anonymity, the 'elements' comprised: (a)

individuals with whom they had worked or currently work, whom they regard as possessing leadership qualities, i.e. had a particularly powerful effect on their motivation, self-confidence, self-efficacy, or performance, (b) individuals who did not possess such qualities, and (c) individuals who were 'in between', plus themselves. For a fuller description of the methodology used, see Alimo-Metcalfe (1998).

Analysis of the constructs. The constructs that emerged from the local government and NHS managers were content analysed by two psychologists working independently of each other, and grouped in terms of underlying dimensions or themes relevant to leadership. Inspection of the groupings formed by the researchers revealed a very high level of agreement between the psychologists, and areas of difference were agreed by discussion. In the final analysis, 48 groups of constructs or 'leadership dimensions' were identified.

Devising questionnaire items. Again working independently of each other, the two psychologists devised a series of statements that reflected the constituent constructs in each group. Here again, the two judges discussed their analyses, with particular attention to differences in the number and the degree of generality vs. specificity of the statements that each had proposed.

Developing the pilot questionnaire. In order to turn the statements about leadership into the pilot questionnaire, such that each of the items was unambiguous, and that the respondent was invited to respond to each item in exactly the same way, Facet Theory was applied (Donald, 1995). Thus, each of the statements was redrafted in a standard format, so that the following criteria were met: (1) the item reflected only a single dimension; (2) the item comprised an active verb; (3) the verb referred to an observable (or readily inferable) behaviour; (4) each of the 48 groups of constructs or 'leadership dimensions' was represented; (5) (with one exception) the item was phrased positively. Again, the two psychologists undertook the activity independently of each other, and then met to discuss possible differences. The major subjects of these discussions were issues of ambiguity, and of whether an item comprised two possibly inconsistent behaviours or qualities. Any such items were rephrased appropriately. Conscious of the strictures of Hunt (1996, p. 198), all of the items exclusively describe leader behaviour, rather than leadership outcomes.

Criterion variables. In order to examine the convergent validity of the instrument, five items (criterion variables) were used. These were designed to measure the perceived effect of the manager on the individual's *achievement* ('enables me to achieve more than I expected'), *job satisfaction* ('behaves in ways which increase my job satisfaction'), *motivation* ('increases my motivation to achieve'), and *satisfaction with leadership style* ('leads in a way that I find satisfying'). A single item criterion variable was added which relates to *stress* ('leads in a way which reduces my job related stress'). Four of these criteria were chosen since they had been used to establish the convergent validity of another, comparable instrument, the MLQ (e.g. Bass & Avolio, 1990*a*, *b*).

It is recognized that the use of self-report evidence can be criticized for leading to possible 'halo effects'. However, given that the instrument has only just been developed, evidence from objective criteria is not yet available; as noted, the criterion variables chosen were those employed in the early stages of the validation of a comparable instrument.

Pilot questionnaires

Two pilot questionnaires were developed, one for local government and one for the NHS. The analyses reported here are based solely on data collected using the local government pilot questionnaire. This comprised 171 items, plus five further items that relate to political sensitivity and skills (added at the request of the Advisory Steering Group, but not analysed here), and five dependent variables. To each item, managers were asked to respond, using a 6-point Likert-type scale. The scale ranged from 'Strongly agree' to 'Strongly disagree'; two additional responses were available: 'Don't know' and 'Not relevant'.

Before distributing it to a national sample of local government managers, the pilot questionnaire was distributed to 50 local government managers, who were asked to comment on (a) the clarity of the wording, and (b) the face validity, of the instrument. No changes were necessary.

Table 2. Composition of pilot sample, by sex and level in their local authority

Level	Subsample 1		Subsample 2	
	Male	Female	Male	Female
Level 1				
Board/Chief Executive	11	0	22	1
Level 2				
Directorate/Director	63	13	64	9
Level 3				
Senior/Assistant Director	172	63	174	52
Level 4				
Middle/Section-Unit Head	307	120	248	136

Note. The sample ($N = 1464$) was divided into two subsamples for the purposes of principal components analysis. The SPSS option 'Approximately 50% random sample' was selected.

The questionnaire was then sent to a previously identified, named individual, selected randomly from a national, strtaified databank of local government organizations, who arranged for the instrument to be distributed to a random sample of managers in their organization. Guidance was given as to the number of individuals at top, senior and middle levels of management to be selected. Each respondent received the questionnaire, together with a covering letter explaining the purpose of the research, and the fact that all responses would be anonymous. A pre-paid envelope was attached to each questionnaire.

The instructions to each individual were, to rate a manager (boss) with whom they worked currently, or with whom they had worked previously for at least six months.

Biographical and organizational data. In order to ensure that the sample included respondents from a full range of local government managers, respondents were asked to provide the following biographical and organizational information: sex of respondent and sex of person being rated (target manager); age of respondent; organizational level of respondent; type of employing organization; race or ethnic origin of respondent; length of time that respondent has known the target manager.

A total of 665 usable questionnaires was returned from the first distribution, and a further 799 questionnaires were returned from a second wave request (approximately 46% response rate).

Results

Exploratory principal components analysis–1

In order to allow the robustness of the solution to be tested, the sample was divided into two random subsamples, each of which comprised approximately 50% of the total (Table 2), and exploratory principal components analyses (EPCA) were conducted on one of the subsamples, using SPSS (1994).[1] Application of the scree test (Cattell, 1966; Ferguson & Cox, 1993) suggested that 11 factors should be rotated (total variance explained, 66.6%), and an oblimin criterion was selected;

[1]Full details of the statistical analyses are available from the authors.

items that loaded at or above 0.30 being regarded as statistically significant. Items which loaded significantly on more than one factor were eliminated (Kline, 1986).

Confirmatory principal components analysis–1

In order to test the robustness of the solution, a confirmatory principal components analysis (CPCA) was carried out on the second subsample, again with rotation of 11 factors to an oblimin criterion. Congruence between oblimin solutions for the two subsamples of managers (Gorsuch, 1983) indicated that for nine of the factors, the coefficients exceeded 0.90; items that did not load at or above 0.30 in both solutions were eliminated.

Exploratory principal components analysis–2

The data from the two subsamples were combined, and a series of EPCAs carried out until a 'clean' structure had been obtained, with rotation of nine factors (eigenvalues > 1.0) to an oblimin solution. The resultant item-structures of the rotated factors were examined for psychological meaningfulness (Appendix A). The factorial structure is presented in Appendix B.

Confirmatory principal component analysis–2

In order to provide a further measure of the robustness, the combined 'clean' data set was again subjected to CPCA, but in this case with rotation of the nine factors to a varimax solution. Here, the congruence of the oblimin $\times$ varimax rotations (Gorsuch, 1983) again exceeded the 0.90 criterion.

Internal reliability

The rotated oblimin factors were given provisional titles, and the alpha coefficients (Cronbach, 1951) and the inter-item correlation coefficients were calculated. These data, together with the number of items in each factor, and the means, standard deviations and coefficients of variation for each factor are presented in Table 3.

Analysis of the factors

As indicated in Table 3, the number of items per factor ranged from five in Factor 8—*Clarifies boundaries, involves others in decisions*, to 17 in Factor 1—*Genuine concern for others*. The alpha coefficients ranged from $r = .85$ to .97, which are well in excess of the minimum of 0.70 recommended by Nunnally (1967), while the inter-item correlation coefficients ranged from $r = .40$ to .83 ($p < .01$ in each case). This latter statistic is relevant since, as noted by Cortina (1993), an alpha coefficient can be high even when intercorrelations between the items is low, thus suggesting the possibility of multidimensionality. Here, all the inter-item coefficients exceeded the minimum of $r > .30$ recommended by Kline (1986). The coefficients of variation

Table 3. Factor names; number of items; means, standard deviations and coefficients of variation; alpha coefficients and range of inter-item correlation coefficients

Factor name	Number of items	*M*	SD	Coefficient of variation	Alpha coefficient	Range of inter-item coefficients
1—Genuine concern for others	17	70.48	18.63	26.43	.97	.52–.81
2—Political sensitivity and skills	6	30.04	4.92	16.38	.92	.47–.79
3—Decisiveness, determination, self-confidence	8	38.52	7.05	18.30	.90	.37–.67
4—Integrity, trustworthy, honest and open	9	39.94	9.72	24.34	.93	.48–.69
5—Empowers, develops potential	8	38.30	7.05	18.41	.91	.37–.73
6—Inspirational networker and promoter	10	43.89	9.78	22.28	.93	.42–.74
7—Accessible, approachable	6	26.16	5.89	22.52	.85	.43–.65
8—Clarifies boundaries, involves others in decisions	5	20.77	4.98	23.98	.85	.43–.61
9—Encourages critical and strategic thinking	7	29.83	6.98	23.40	.89	.44–.66

Table 4. Intercorrelation between oblimin factor scores

Factor	1	2	3	4	5	6	7	8	9
1	—								
2	.32	—							
3	−.32	−.41	—						
4	−.50	−.33	.30	—					
5	.54	.25	−.28	−.41	—				
6	.37	.48	−.48	−.31	.26	—			
7	.46	.28	−.22	−.41	.33	.28	—		
8	.47	.23	−.29	−.35	.35	.31	.26	—	
9	−.52	−.28	.36	.32	−.40	−.42	−.29	−.37	—

(Yeomans, 1968) were all of a similar order of magnitude to each other, and all sufficiently high to indicate an adequately wide spread of responses to the items that comprise the nine factors.

Interpretation of factors

The nine factors were interpreted as follows:

(1) Genuine concern for others.
(2) Political sensitivity and skills.
(3) Decisiveness, determination, self-confidence.
(4) Integrity, trustworthy, honest and open.
(5) Empowers, develops potential.
(6) Inspirational networker and promoter.
(7) Accessible, approachable.
(8) Clarifies boundaries, involves others in decisions.
(9) Encourages critical and strategic thinking.

Intercorrelations between factors

The factor matrix for the oblimin factors for the total sample of participants is presented in Table 4.

The relationships between the factors range from $r = -.52$ (Factor 1 × Factor 9) to $r = .54$ (Factor 1 × Factor 5).

Relationship between 'higher-order' clusters and factors

The correspondence between the nine 'higher-order' factors and the nine factors that emerged is presented in Table 5.

For each factor, the number of items that were derived from a corresponding 'higher-order' cluster was determined, and expressed as a fraction of the total

Table 5. Relationship between 'higher-order' clusters and factors

'Higher-order' cluster	Factor	Common items[a]	Match[b]
A—Political Skills, Managing External Environment	2—Political sensitivity and skills	6/6	Yes
	6—Inspirational networkers and promoter	9/10	Yes
B—Empowering, Delegating	5—Empowers, develops potential	7/8	Yes
	8—Clarifies boundaries, involves others in decisions	5/5	Yes
C—Inspiration, Respected/Generates Loyalty	6—Inspirational networker and promoter	—	No
D—Visionary, Clear Strategic Plan/Conviction	9—Encourages critical and strategic thinking	—	No
E—Personal Qualities	3—Decisiveness, determination, self-confidence	6/8	Yes
F—Integrity, Consistency of Behaviour, Values	4—Integrity, trustworthy, honest and open	7/9	Yes
G—Intellectual Capacity, Ability to See Big Picture		—	No
H—Supports Staff, Knows What Motivates Staff, Listens/Empathic	1—Genuine concern for others	17/17	Yes
	7—Accessible, approachable	2/6	No
I—Encourages Critical Thinking	9—Encourages critical and strategic thinking	6/7	Yes

[a]The figure denotes the number of factor items that were derived from the corresponding 'higher-order' cluster; where fewer than two items matched, this was recorded as a blank.
[b]A match of 75% or above was judged 'positive', below 75% 'negative'.

number of items that loaded on that factor. Where the correspondence was three-quarters or above, it was judged to be 'positive', and below three-quarters, 'negative'. In eight of the 12 comparisons made, the match was judged to be positive; in four of the 12, negative. In three cases, the provenance of two factors was to be found in the same 'higher-order' cluster. Thus, both Factor 2—*Political sensitivity and skills* and Factor 6—*Inspirational networker and promoter* were derived from Cluster A, while Factor 5—*Empowers, develops potential* and Factor 8—*Clarifies boundaries, involves others in decisions* derived from Cluster B, and Factor 1—*Genuine concern for others* and, to a small extent, Factor 8—*Accessible, approachable*, from Cluster H.

Formally, therefore, there was some support for the tentative hypothesis, there being evidence of a cluster/factor match in that in the cases of the six factors labelled. *Genuine concern for others*, *Political sensitivity and skills*, *Decisiveness, determination, self-confidence*, *Integrity, trustworthy, honest and open*, *Clarifies boundaries, involves others in decisions*, and *Encourages critical and strategic thinking*, their derivation was as might have been expected. However, in only two of these cases (Cluster E—Personal Qualities/Factor 3—*Decisiveness, determination, self-confidence*; and Cluster I—Encourages Critical Thinking/Factor 9—*Encourages critical and strategic thinking*) were the relationships exactly as predicted. In three cases (Cluster A—Political Skills, Managing External Environment; Cluster B—Empowering, Delegating; and Cluster H—Supports Staff, Knows What Motivates Staff, Listens/Empathic), the items loaded on two factors. The items that comprised three of the clusters (Cluster C—Inspiration, Respected/Generates Loyalty; Cluster D—Visionary, Clear Strategic Plan/Conviction; Cluster G—Intellectual Capacity, Ability to See Big Picture) either loaded on the other factors, or were eliminated.

Convergent validity

Product moment correlation coefficients were calculated betwen each of the nine factors and each of the five criterion variables.[2] Apart from Factor 2—*Political sensitivity and skills* (where the *r*s ranged from .42 to .49), the coefficients ranged from $r = .58$ (Factor 3—*Decisiveness* × *Stress* (negative)) to $r = .85$ (Factor 1—*Genuine concern for others* × *Motivation*) ($p < .001$, in all cases). The highest coefficients were with Factor 1 (range $r = .75$ to .85), and in four out of the five criterion variables, the second highest correlations were with Factor 4—*Integrity* (range $r = .68$ to .80). In four cases, the second or third highest correlations were with Factor 9—*Encourages critical and strategic thinking* (range $r = .71$ to .74).

When coefficients were calculated (1) for managers grouped by level (Level 1 and 2 (combined); Level 3; Level 4), and (2) for males and females separately, they were also found to be statistically significant beyond the 1% level, and there was no evidence of sex differences. These results were deemed to provide evidence of the convergent validity of the TLQ-LGV.

[2]Full details available from the authors on request.

Sex-related differences

Although, ideally, the principal components and subsequent analyses would have been conducted separately for female and male managers, this was not practicable, as the number of identified female managers was not large enough for meaningful analyses to be conducted. What evidence as is available indicates that, as noted above, no significant differences were detected between any of the factors and any of the criterion variables.

Evidence of 'second-order' factors

The nine first-order factors are themselves highly intercorrelated, suggesting a large amount of shared variance, and raising the question as to whether a simpler factorial structure could be identified.

In order to test the factorial structure of any interpretable 'second-order' factors, the nine emergent factors were themselves subjected to principal components analysis, based on regression analysis. The two factors that emerged with an eigenvalue greater than unity were rotated to an oblimin criterion. The resultant structure (Appendix C) comprised two factors, both of which are transformational. Factor I (variance accounted for 42.9%) comprised: *Genuine concern for others*; *Empowers, develops potential*; *Integrity, trustworthy, honest and open* (negative); *Accessibility, approachability*; *Encourages critical and strategic thinking* (negative), while Factor II (variance accounted for 12.3%) comprised: *Inspirational networker and promoter*; *Decisiveness, determination, self-confidence* (negative); *Political sensitivity and skills.*

The two 'second-order' factors were interpreted as: Internal-orientation (Factor I) and External-orientation (Factor II). The two factors were negatively correlated, $r = -.50$.

Discussion

This study was undertaken to investigate the nature of transformational leadership in two large parts of the UK public sector. The decision was taken to adopt a qualitative methodology for the first stage of the current research, thereby applying in the first instance a Grounded Theory approach. Individuals at four levels from middle management to top management, both male and female, described their constructs of a manager with whom they had worked closely. The intention was to understand the characteristics of 'nearby' or 'close' transformational leaders at different levels in the organization. Care was taken to ensure that the items all reflected active behaviour on the part of the boss, and not the effect of her/his behaviour on the subordinate (cf. Hunt, 1996, p. 189).

The inter-factor correlations ranged from negative ($r = -.52$ (Factor 1× Factor 9) to positive $r = .54$ (Factor 1 × Factor 5), thus suggesting that the factors are measuring different aspects of transformational leadership. That transformational leadership should be multidimensional is consonant with evidence that the MLQ comprises more than one 'transformational' dimension (e.g. Bass, 1998*a*, *b*), though not with the analyses by Den Hartog *et al.* (1997), nor by Carless (1998).

Data from the present study yielded nine oblique factors, with high internal reliabilities and each with significant inter-item correlations. This latter statistic is important since even scales with a high internal reliability can be measuring more than one dimension (Cortina, 1993; Kline, 1986). Calculation of the coefficients of variation indicate that the coefficients are all of the same order of magnitude, and that the items that comprise the factors serve to discriminate between respondents to a satisfactorily large degree (Yeomans, 1968). It should also be noted that, as each item reflects a kind of behaviour, the factors offer considerable benefit as the basis of identifying and providing for developmental needs.

Hypothesis

Formally, there was some support for the hypothesis, that 'higher-order' clusters of items would correspond to the factors that emerged following principal components analysis. In the cases of eight of the nine factors, *Genuine concern for others*, *Political sensitivity and skills*, *Decisiveness, determination, self-confidence, Integrity, trustworthy, honest and open*, *Inspirational networker and promoter*, *Clarifies boundaries, involves others in decisions*, and *Encourages critical and strategic thinking*, their provenance could readily be traced.

In two cases (Cluster E—Personal Qualities/Factor 3—*Decisiveness, determination, self-confidence*; and Cluster I—Encourages Critical Thinking/Factor 9—*Encourages critical and strategic thinking*) there was a one-to-one cluster/factor link. In a further three cases, items that comprised the cluster were readily identifiable in two different factors. Thus, Cluster A—Political Skills, Managing External Environment shared items in common with both Factor 2—*Political sensitivity and skills* and Factor 6—*Inspirational networker and promoter*, Cluster B—Empowering, Delegating with Factor 5—*Empowers, develops potential* and Factor 8—*Clarifies boundaries, involves others in decisions*, Cluster H—Supports Staff, Knows What Motivates Staff, Listens/Empathic with Factor 1—*Genuine concern for others* and, to a small extent, Factor 7—*Accessible, approachable*. However, there was no factor counterpart to Cluster C—Inspiration, Respected/Generates Loyalty, Cluster D—Visionary, Clear Strategic Plan/Conviction, or Cluster G—Intellectual Capacity, Ability to See Big Picture. The items that comprised three of the clusters either loaded on the other factors, or were eliminated. It is, perhaps, worth noting that one of the Cluster C items, relating to 'inspiration', loaded on Factor 6—*Inspirational networker and promoter*, and one of the Cluster D items, relating to 'vision' loaded on Factor 2—*Political sensitivity and skills*. Also, one of the Cluster G items, relating to dealing with the 'big picture', loaded on Factor 3—*Decisiveness, determination, self-confidence*.

Each of the cluster/factor links is readily interpretable. Thus, that the items that comprise Factor 6 derived almost exclusively from Cluster A is not surprising, since it comprises a number of 'political-type' items; only one item was derived, as predicted, from Cluster C—Inspiration, Respected/Generates Loyalty. Two of the six items that constitute Factor 8—*Accessible, approachable* are (in common with Factor 1—*Genuine concern for others*) derived from Cluster H—Supports Staff, Knows What Motivates Staff, Listens/Empathic—an observation which is not, on reflection, surprising.

On this basis, the Transformational Leadership Questionnaire-Local Government Version (TLQ-LGV) was developed.

Validity

The validity of the TLQ-LGV was measured against four dependent variables similar to those used to test the MLQ, plus a fifth variable measuring stress. In each case, a statistically significant relationship was detected ($p < .001$). Other than for Factor 2—*Political sensitivity and skills*, the provenance of which is different from the other factors, the transformational factors can be regarded as accounting for between 34% and 72% of shared variance with the dependent variables, suggesting significant convergent validity. There was no evidence of significant sex-related differences in the validity of the TLQ-LGV for male and female managers.

The use of same-source data is open to the criticism that it is susceptible to possible 'halo' effects, though care was taken to ensure that evidence gathered was of the kind initially produced for the MLQ. The force of this criticism is fully recognized, but in attempting to offer some kind of evidence of validity, the authors were conscious of the potential dangers attendant upon seeking independent, other-source data, and thus of concurrent validity. To have been able to match the self-report data, upon which the TLQ-LGV is based with other-source ratings of, say, effectiveness, might have compromised the integrity of the former, which were gained under conditions which ensured complete anonymity. Even where, in order to obtain evidence of concurrent validity, questionnaires are coded or numbered such that other-source data can be collected while ensuring some kind of anonymity, there is always the suspicion that the identity of the respondent could be ascertained at a later date. The integrity of the responses to the items, and thus the construct validity of the instrument, was judged to be of first and foremost importance.

The need to determine the concurrent and predictive validity of the TLQ-LGV is recognized, and this can be undertaken once the instrument has been published and is widely available. In the meantime, the evidence presented in this paper is, perhaps, best regarded as consonant with the validity of the instrument, but not as definitive.

Second-order factors

That the factor scores should be highly intercorrelated indicates that the factors share much variance in common. When principal components analysis was performed on the nine factors, two 'second-order' factors emerged. Factor I (*Genuine concern for others*; *Empowers, develops potential*; *Integrity, trustworthy, honest and open* (negative); *Accessibility, approachability*; and *Encourages critical and strategic thinking* (negative) was labelled Internal-orientation. Factor II (*Inspirational networker and promoter*; *Decisiveness, determination, self-confidence* (negative); and *Political sensitivity and skills*) was labelled External-orientation.

Each of the two factors is transformational in nature, with Factor I being interpretable as relevant to relationships within the organization or department, while the focus of Factor II interpretable as relationships which affect links with the

outside world. That the two factors should both be transformational in nature is in contrast to other 'second-order' leadership structures, such as that of Bass (1985, 1998*b*), based as it is on both transformational and transactional items. The identification of these two 'second-order' transformational factors may also, in part, address Yukl's (1999) point 'the two-factor theories tend to obscure important underlying notions included within the factors'.

There is the need for further analysis of the psychological significance of these factors, using factor analytic and other multivariate techniques, but these are considered beyond the scope of this paper.

The richness and complexity of the model of transformational leadership emerging from this study may have been the result of basing it on Grounded Theory. The present study has addressed Hunt's (1999) concern that 'the preponderance of new leadership research continues to be conducted by surveys'.

The breadth of the initial sample of participants from four managerial levels, and the inclusion of a large number of females in the initial sample, are likely to have contributed to the richness in the range of constructs. Certainly, earlier studies in both local government and NHS organizations revealed that women are far more likely than men to construe leadership in a transformational way (Alimo-Metcalfe, 1995; Sparrow & Rigg, 1993).

The use of a Grounded Theory methodology is consonant with the views of researchers such as Bryman (1988, 1996), Bryman, Bresnen, Beardsworth, and Keil (1988), Conger (1998) and Parry (1998). As Conger (1998) observed, 'they can be the richest of studies . . . [and] are responsible for paradigm shifts, insights into the role of context, and longitudinal perspectives that other methods often fail to capture'.

It is valuable to look for similarities and differences between the TLQ-LGV and transformational dimensions of the MLQ, which is currently one of the most widely used (Bryman, 1992) and respected leadership instruments. It is, therefore, of interest to note that dimensions measured by the MLQ also emerge in the TLQ-LGV. The greatest area of similarity is between the MLQ component, *Individualized consideration* and *Genuine concern for others*.

However, while similarities exist, two important points of difference should be noted. These are, *Individualized consideration* emerged as the last transformational factor in analyses of the MLQ, explaining the least amount of variance, whereas in the TLQ-LGV, *Genuine concern for others* was the first and by far the most important factor, explaining twice as much variance as the remaining eight factors put together.

Another difference is that *Genuine concern for others* appears to be a much 'richer' dimension than *Individualized consideration*, comprising as it does: genuine interest in, and a sensitivity to the needs and feelings of others; actively supporting their development; giving personal job-related support; communicating positive expectations; and taking time to develop the team. The essential difference between the US and UK approaches, as reflected in this first factor is clear. The emphasis in the UK understanding of transformational leadership appears to be on what the leader *does* for the individual, such as empowering, valuing, supporting, and developing. In contrast, the US model is primarily about the leader acting as a role model and

inspiring the 'follower', as reflected in the MLQ Charismatic-inspirational dimension, with the leader envisioning a valued future, articulating how to reach it, and setting him/herself as an example with which followers can identify, and which they can emulate (Bass, 1998*a*). This sense of 'fellowship', which is so pervasive in the US literature on leadership, is absent in the UK approach. Certainly, there is no notion of 'followership' in either the first UK factor, or explicitly in any of the other TLQ-LGV factors.

In common with the MLQ, the TLQ-LGV contains a factor relating to encouraging critical thinking and challenging traditions and assumptions, and generating wholly new approaches to problems (*Encourages critical and strategic thinking* in the TLQ-LGV, and *Intellectual stimulation* in the MLQ). However, the TLQ-LGV includes a separate factor relating to 'empowerment', which also forms a component of the *Individualized consideration* dimension of the MLQ. The TLQ-LGV scale includes behaviours which relate to decision latitude and job control (cf. De Rijk, Le Blanc, Schaufeli, & de Jonge, 1998; Karasek, 1979, 1981), thus providing a rich operationalization of the dimension. Research which has investigated the relationship between job demands and job control (decision-latitude) has found that, for individuals who are high in active coping, the greater the opportunity afforded the individual to control their job, the lower the level of emotional exhaustion (e.g. De Rijk *et al.*, 1998). In a study of leadership style and perceived stress in the job (Offerman & Hellman, 1996), it was found that greater stress was reported by staff who had little authority delegated to them, together with high leader pressure and control. The least stress was reported by staff with high levels of delegated authority, regardless of level of leader control. Furthermore, among staff working in the NHS (Borrill *et al.*, 1996; Borrill *et al.*, 1998), influence over decisions about how one carries out one's job was negatively related to perceived job-related stress.

The separate TLQ-LGV dimension of being 'Accessible and approachable', corresponds in part to the MLQ definition of *Individualized consideration*. However, the TLQ-LGV identified specific behaviours relating to aspects of management support, which have also been found to relate significantly to perceptions of lower stress in the job (e.g. Borrill *et al.*, 1996, 1998; Offerman & Hellman, 1996).

The TLQ-LGV dimension *Integrity* also relates to an element of the *Charismatic-inspirational* dimension of the MLQ, but here again, the TLQ-LGV scale is more explicit. It also includes additional behaviours relating to admitting when one is wrong, and being prepared to say when one does not know what to do.

Apart from the *political sensitivity and skills* factor, which may relate only to certain parts of the UK public sector, and the provenance of which differs from that of the other factors, there are three factors that are unique to the TLQ-LGV. These are: *Decisiveness, determination and self-confidence* (which may overlap slightly with MLQ factor *charismatic-inspirational*); *Inspirational networker and promoter*; and *Clarifies boundaries, involves others in decisions*.

Inclusion of a 'clarifying boundaries and responsibilities' scale may, at first, seem surprising; however, two points are worth making. The first is that it combines clarification of boundaries and responsibilities with behaviours relating to involving others in what is happening in the organization, which is an important aspect of

transformational leadership. The second is that research on stress (e.g. Offerman & Hellman, 1996) has found that combining autonomy with clarifying objectives is an important predictor of lower levels of stress in the job.

Summary

There appears to be a far greater sense of proximity and openness, humility, 'vulnerability', and organizational embeddedness in the UK approach compared to the US, which may, at least in part, reflect Shamir's (1995) findings about characteristics perceived of 'distant' as opposed to 'nearby' leaders. Certainly, this is too great a distinction to ignore. The UK approach resembles more closely Greenleaf's (1970, 1996) notion of 'leader as servant'.

In all, the UK approach appears to have gained a clearer picture of leadership as a social influence process, in which 'connectedness' between the 'leader' and individual is not only the most powerful component, but is reflected explicitly in at least six of the factors. The behaviours identified may also be useful in discriminating between 'pseudo-transformational leaders', those 'Self-concerned, self-aggrandizing, exploitative, and power-oriented ... leaders [with] distorted utilitarian and warped moral principles' (Bass, 1998*b*), and those who are genuinely transformational.

The factors emerging in the TLQ-LGV are based on individuals' descriptions of behaviour that they attribute to leadership, and provide a detailed, operational definition of its various components, which can be used to identify and guide provision to meet the developmental needs at all levels of management, to inform selection and promotion decisions, and performance management systems.

Whether the differences between the MLQ and TLQ-LGV are due to cultural, organizational, or gender differences, has yet to be investigated. Meanwhile, the present findings suggest that organizations intending to increase the quality of leadership should be wary of relying simply on the approaches which currently dominate the literature.

The present study is limited in that the content of the TLQ-LGV is based almost exclusively on constructs of leadership espoused by managers working within two parts of the UK public sector; constructs were not elicited from managers working in other parts of the public sector, e.g. the Civil Service, schools, nor from private sector managers. Also, although the sample from whom constructs were elicited initially included a significant number of female managers at all levels, the number of female board/chief executive level managers in the final sample was minimal.

Second, although every attempt was made to ensure the gender-inclusiveness of the TLQ-LGV, the size and composition of the sample available for the factor analyses was not such as to allow separate analysis of the data by sex. The collection of further data will enable such analyses.

Third, because both the TLQ-LGV and the criterion variables data were collected using self-reports, the evidence of validity presented could be interpreted as due, to a significant extent, to 'halo' effects. This points to the urgent need to provide external evidence of the validity of the instrument. The next stages in the research will involve (a) analysis of the factorial structure of the TLQ, using

confirmatory factor analysis; (b) determination of the concurrent validity of the instrument, using independent, objectively measurable criteria; (c) investigation of the discriminant as well as the convergent validity of the TLQ, with reference to female vs. male managers, and managers at different levels, and in different organizations.

Acknowledgements

The research was co-funded by the Local Government Management Board (now the Improvement and Development Agency (IDeA)) and the University of Leeds. The authors would like to record the considerable debt to Carole Barrie, Ian Briggs, and Stephanie Goad, who were instrumental in the planning and design of the project, and provided invaluable support throughout. It should be noted that the views expressed in this paper are solely those of the author.

The authors also wish to record their indebtedness to Dr Eamonn Ferguson of the University of Nottingham for his invaluable help and guidance with the factor analyses, and their gratitude to the referees and to the editor for their valuable comments.

References

Adler, N. J. (1983*a*). A typology of management studies involving culture. *Journal of International Business Studies, 14,* 29–47.

Adler, N. J. (1983*b*). Cross-cultural management research: The ostrich and the trend. *Academy of Management Review, 8,* 226–232.

Alban-Metcalfe, R. J. (1997). Repertory Grid Technique. In J. Keeves (Ed.), *Educational research, methodology, and measurement: An international handbook* (2nd ed., pp. 5013–5016). Oxford: Elsevier.

Alimo-Metcalfe, B. (1995). An investigation of female and male constructs of leadership and empowerment. *Women in Management Review, 10,* 3–8.

Alimo-Metcalfe, B. (1998). *Effective leadership.* Local Government Management Board.

Avolio, B. J. (1995). Transformational leadership. *Leadership Review Quarterly, 1,* 4.

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

Bass, B. M. (1997). Does the transactional-transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist, 52,* 130–139.

Bass, B. M. (1998*a*). Current developments in transformational leadership: Research and applications. Invited address to the American Psychological Association, San Francisco, August.

Bass, B. M. (1998*b*). *Transformational leadership: Industrial, military, and educational impact.* Mahwah, NJ: Erlbaum.

Bass, B. M., & Avolio, B. J. (1990*a*). *Multifactor Leadership Questionnaire.* Palo Alto, CA: Consulting Psychologists Press.

Bass, B. M., & Avolio, B. J. (1990*b*). *Transformational Leadership Development: Manual for the Multifactor Leadership Questionnaire.* Palo Alto, CA: Consulting Psychologists Press.

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership.* Thousand Oaks, CA: Sage.

Berry, J. W. (1969). On cross-cultural comparability. *International Journal of Psychology, 4,* 119–228.

Borrill, C. S., Wall, T. D., West, M. A., Hardy, G. E., Shapiro, D. A., Carter, A. J., Golya, D. A., & Haynes, C. E. (1996). *Mental health of the workforce in NHS Trusts (Phase 1, Final Report).* Sheffield: University of Sheffield, Institute of Work Psychology; Leeds: University of Leeds, Psychological Therapies Research Unit.

Borrill, C. S., Wall, T. D., West, M. A., Hardy, G. E., Shapiro, D. A., Haynes, C. E., Stride, C. B., Woods, D., & Carter, A. J. (1998). *Stress among staff in NHS Trusts. Final Report.* Sheffield: University of Sheffield, Institute of Work Psychology; Leeds: University of Leeds, Psychological Therapies Research Unit.

Bryman, A. (1988). *Quantity and quality in social research.* London: Routledge.

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

Bryman, A. (1996). Leadership in organizations. In S. R. Clegg, C. Hardy & W. R. Nord (Eds.), *Handbook of organizational studies* (pp. 276–292). London: Sage.

Bryman, A., Bresnen, M., Beardsworth, A., & Keil, T. (1988). Qualitative research and the study of leadership. *Human Relations, 41,* 13–30.

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

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

Carless, S. A. (1998). Assessing the discriminant validity of transformational leader behaviour as measured by the MLQ. *Journal of Occupational and Organizational Psychology, 71,* 353–358.

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioural Research, 1,* 1–161.

Conger, J. A. (1989). *The charismatic leader: Behind the mystique of exceptional leadership.* San Francisco, CA: Jossey-Bass.

Conger, J. A. (1998). Qualitative research as the cornerstone methodology for understanding leadership. *Leadership Quarterly, 9,* 107–121.

Conger, J. A., & Kanungo, R. N. (1988). Behavioural dimensions of charismatic leadership. In J. A. Conger & R. N. Kanungo (Eds.), *Charismatic leadership: The elusive factor in organizational effectiveness* (pp. 78–97). San Francisco, CA: Jossey-Bass.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78,* 98–104.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16,* 297–334.

De Rijk, A. E., Le Blanc, P. M., Schaufeli, W. B., & de Jonge, J. (1998). Active coping and need for control as moderators of the job demand-control model: Effects of burnout. *Journal of Occupational and Organizational Psychology, 71,* 1–18.

Den Hartog, D. N., Van Muijen, J. J., & Koopman, P. L. (1997). Transactional versus transformational leadership: An observational field study. *Journal of Occupational and Organizational Psychology, 70,* 19–34.

Den Hartog, D. N., House, R. J., Hanges, P. J., Ruiz-Quintanilla, S. A., Dorfman, P. W., & Associates (1999). Culture specific and cross-culturally generalizable implicit leadership theories: Are attributes of charismatic/transformational leadership universally endorsed? *Leadership Quarterly, 10,* 219–256.

Donald, I. (1995). Facet theory: defining research domains. In G. M. Breakwell, S. Hammond & C. Fife-Shaw (Eds.), *Research methods in psychology* (pp. 116–137). London: Sage.

Erez, M. (1990). Toward a model of cruss-cultural industrial and organizational psychology. In C. H. Triandis, M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 4, 2nd ed., pp. 559–608). Palo Alto, CA: Consulting Psychologists Press.

Ferguson, E., & Cox, T. (1993). Exploratory factor analysis: A users' guide. *International Journal of Selection and Assessment, 1,* 84–94.

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

Gasper, S. (1992). *Transformational leadership: An integrative review of the literature.* Doctoral dissertation, Western Michigan University.

Gorsuch, R. L. (1983). *Factor analysis.* Hillsdale, NJ: Erlbaum.

Greenleaf, R. K. (1970). *The servant as leader.* San Francisco, CA: Jossey-Bass.

Greenleaf, R. K. (1996). *On becoming a servant leader.* San Francisco, CA: Jossey-Bass.

Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership. *American Psychologist, 49,* 493–504.

House, R. J. (1977). A 1976 theory of charismatic leadership. In J. G. Hunt & L. L. Larson (Eds.), *Leadership: The cutting edge* (pp. 189–207). Carbondale, IL: Southern Illinois University Press.

Hunt, J. G. (1996). *Leadership: A new synthesis.* Newbury Park, CA: Sage.

Hunt, J. G. (1999). Transformational/charismatic leadership's transformation of the field: An historical essay. *Leadership Quarterly, 10,* 129–144.

Hunt, J. G., & Peterson, M. F. (1997). Two scholars' views of some nooks and crannies in cross-cultural leadership. *Leadership Quarterly, 8,* 343–354.

Karasek, R. A., Jr. (1979). Job demands, job control and mental strain: Implications for job redesign. *Administrative Science Quarterly, 24,* 285–308.

Karasek, R. A. (1981). Job control, decision latitude, job redesign, and coronary heart disease. In G. Salvendy & M. J. Smith (Eds.), *Machine-pacing and occupational stress* (pp. 45–55). London: Taylor & Francis.

Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York: Wiley.

Kelly, G. A. (1955). *Psychology of personal constructs* (Vols. 1 and 2). New York: Norton.
Kline, P. (1986). *Handbook of test construction: Introduction to psychometric design.* London: Methuen.
Lowe, K., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review. *Leadership Quarterly, 7,* 385–425.
Nunnally, J. O. (1978). *Psychometric theory.* New York: McGraw-Hill.
Offerman, L. R., & Hellman, P. S. (1996). Leader behavior and subordinate stress: A 360° view. *Journal of Occupational Health Psychology, 1,* 382–390.
Parry, K. W. (1998). Grounded theory and social processes: A new direction for leadership research. *Leadership Quarterly, 9,* 85–105.
Patterson, C., Fuller, J. B., Kester, K., & Stringer, D. Y. (1995). *A meta-analytic examination of leadership style and selected compliance outcomes.* Paper presented to the Society for Industrial and Organizational Psychology, Orlando, FL.
Rosenbach, W. E., & Taylor, R. L. (Eds.) (1993). *Contemporary issues in leadership.* Oxford: Westview Press.
Rost, J. C. (1993). *Leadership for the twenty-first century.* Westport, CT: Praeger.
Sashkin, M. (1988). The visionary leader. In J. A. Conger & R. N. Kanungo (Eds.), *Charismatic leadership: The elusive factor in organizational effectiveness* (pp. 122–160). San Francisco, CA: Jossey-Bass.
Shamir, B. (1995). Social distance and charisma: Theoretical notes and an exploratory study. *Leadership Quarterly, 6,* 19–47.
Smith, P. B., & Bond, M. H. (1993). *Social psychology across cultures: Analysis and perspectives.* Needham, MA: Allyn & Bacon.
Smith, P. B., Misumi, J., Tayeb, M., Peterson, M. F., & Bond, M. (1989). On the generality of leadership style measures across cultures. *Journal of Cross Cultural Psychology, 62,* 97–109.
Smith, P. B., & Peterson, M. F. (1988). *Leadership, organizations and culture: An event management model.* London: Sage.
Sparrow, J., & Rigg, C. (1993). Job analysis: Selecting for the masculine approach to management. *Selection and Development Review, 9,* 5–8.
SPSS (1994). *SPSS Advanced Statistics 6.1.* Chicago, IL: SPSS.
Tichy, N., & Devanna, M. (1986). *Transformational leadership.* New York: Wiley.
Tracey, J. B., & Hinkin, T. R. (1998). Transformational leadership or effective management practice? *Group and Organizational Management, 23,* 220–235.
Triandis, C. H. (1990). Cross-cultural industrial and organizational psychology. In C. H. Triandis, M. C. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 4, 2nd ed., pp. 103–172). Palo Alto, CA: Consulting Psychologists Press.
Triandis, C. H. (1993). The contingency model in cross-cultural perspective. In M. M. Chemers & R. Ayman (Eds.), *Leadership theory and research perspectives and directions* (pp. 167–188). San Diego, CA: Academic Press.
Vroom, V. H., & Yetton, P. N. (1973). *Leadership and decision making.* Pittsburgh, PA: University of Pittsburgh Press.
Weber, M. (1947). *The theory of social and economic organizations* (T. Parsons, Trans.). New York: Free Press. (Original work published in 1924.)
Wright, P. L. (1996). *Managerial leadership.* London: Routledge.
Yeomans, K. A. (1968). *Introducing statistics* (Vol. 1). Harmondsworth: Penguin.
Yukl, G. A. (1989). Managerial leadership: A review of theory and research. *Journal of Management, 15,* 251–289.
Yukl, G. A. (1994). *Leadership in organizations* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
Yukl, G. A. (1999). An evaluative essay on current conceptions of effective leadership. *European Journal of Work and Organizational Psychology, 8,* 33–48.
Zaleznik, A. (1993). Managers and leaders: Are they different? In W. W. Rosenbach & R. L. Taylor (Eds.), *Contemporary issues in leadership* (pp. 36–56). Oxford: Westview Press.

Received 28 June 1999; revised version received 17 May 2000

Appendix A: Interpretation of factors

The nine factors were interpreted as follows:

(1) *Genuine concern for others*—genuine interest in me as an individual; develops my strengths.
(2) *Political sensitivity and skills*—sensitive to the political pressures that elected members face; understands the political dynamics of the leading group; can work with elected member to achieve results.
(3) *Decisiveness, determination, self-confidence*—decisive when required; prepared to take difficult decisions; self-confident; resilient to setbacks.
(4) *Integrity, trustworthy, honest and open*—makes it easy for me to admit mistakes; is trustworthy; takes decisions based on moral and ethical principles.
(5) *Empowers, develops potential*—trusts me to take decisions/initiatives on important issues; delegates effectively; enables me to use my potential.
(6) *Inspirational networker and promoter*—has a wide network of links to external environment; effectively promotes the work/achievements of the department/organization to the outside world; is able to communicate effectively the vision of the authority/department to the public/community.
(7) *Accessible, approachable*—accessible to staff at all levels; keeps in touch using face-to-face communication.
(8) *Clarifies boundaries, involves others in decisions*—defines boundaries of responsibility; involves staff when making decisions; keeps people informed of what is going on.
(9) *Encourages critical and strategic thinking*—encourages the questioning of traditional approaches to the job; encourages people to think of wholly new approaches/solutions to problems; encourages strategic, rather than short-term thinking.

Appendix B: Factorial structure

Factor/ Item loading	1	2	3	4	5	6	7	8	9
GC1	.74								
GC2	.74								
GC3	.68								
GC4	.68								
GC5	.67								
GC6	.65								
GC7	.64								
GC8	.64								
GC9	.61								
GC10	.61								
GC11	.59								
GC12	.59								
GC13	.55								
GC14	.50								
GC15	.46								
GC16	.44								
GC17	.35								
PS1		.91							
PS2		.88							
PS3		.88							
PS4		.85							
PS5		.82							
PS6		.34							
D1			.81						
D2			.71						
D3			.68						
D4			.58						
D5			.54						
D6			.49						
D7			.47						
D8			.36						
I1				.69					
I2				.66					
I3				.64					
I4				.64					
I5				.57					
I6				.55					
I7				.50					
I8				.48					
I9				.42					
EP1					.85				
EP2					.73				
EP3					.72				
EP4					.65				
EP5					.57				

Appendix B: Factorial structure (Continued)

Factor/ Item loading	1	2	3	4	5	6	7	8	9
EP6					.52				
EP7					.42				
EP8					.35				
N1						.77			
N2						.73			
N3						.73			
N4						.66			
N5						.57			
N6						.44			
N7						.43			
N8						.42			
N9						.40			
N10						.38			
AA1							.78		
AA2							.69		
AA3							.48		
AA4							.42		
AA5							.37		
AA6							.31		
CL1								.66	
CL2								.58	
CL3								.49	
CL4								.48	
CL5								.46	
EC1									.73
EC2									.70
EC3									.57
EC4									.56
EC5									.45
EC6									.38
EC7									.37

Appendix C: 'Second-order' factor structure

First-order factor	I	II
1—Genuine concern for others	.84	
5—Empowers, develops potential	.80	
4—Integrity, trustworthy, honest and open	−.69	
7—Accessibility, approachability	.66	
8—Clarifies boundaries, involves others in decisions	.61	
9—Encourages critical and strategic thinking	−.51	
6—Inspirational networker and promoter		−.80
3—Decisiveness, determination, self-confidence		.79
2—Political sensitivity and skills		−.78
Variance	42.9%	12.3%