

# A unified theory of leadership: experiences of higher states of consciousness in world-class leaders

Harald S. Harung, Dennis P. Heaton and Charles N. Alexander

**Argues that world-class leaders have more frequent experiences of higher states of consciousness than comparison groups**

## Consciousness and leadership: a new paradigm for the twenty-first century

The importance of leadership is demonstrated by the ever-growing proliferation of books and articles on the subject for both practitioners and scholars. The need to develop leadership is acute today since the shift from simple manual work to sophisticated knowledge work demands more widespread self-management and effectiveness (Davidow and Malone, 1993; Harung, 1994; Harung and Heaton, 1993; Manz and Sims, 1993). Indeed, Carnevale's (1990) description of skills for the new economy – such as taking responsibility for the whole organization, setting goals, and influencing other people – in effect calls for the development of leadership in every member of an organization.

Despite this growing need and interest, leaders continue to be in short supply (Drucker, 1967; Hoare, 1993). Prominent writers (e.g. Bass, 1985; Drucker, 1967) do not accept that we must rely on the historically short supply of "born leaders". They argue, instead, that leadership is a set of behavioural skills which can be learned. Yet experience shows that conventional leadership training strategies are not enough to transform individuals into leaders. Chakraborty (1995) argues for the reinstatement of "character" in leadership development, instead of just "behaviour". He quotes Kaplan (1990): "Behavioural change certainly has its place in management development. But for senior managers to significantly change the way they lead their organizations, behavioural change is often not enough. Instead, some type of change of character or identity is required". Similarly, Warren Bennis has observed, "Leadership courses can only teach skills. They can't teach character or vision

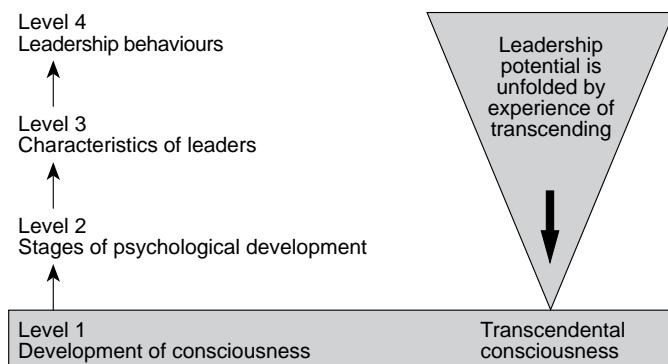
and indeed they don't even try" (quoted in Chakraborty, 1995, p. 155).

Figure 1 introduces a new paradigm of leadership development from the deepest inner aspect of life rather than the surface level of behaviour. A consideration of the different levels of Figure 1 outlines this new leadership theory:

- *Level 4.* This level represents the most expressed level of leadership behaviours, such as: formulate strategic plans, inspire team effort towards a common goal; and build collaborate relationships. Intervening on level 4, i.e. by training in such behavioural skills as planning and negotiation, has given some benefits. Yet level 4 is not sufficient in itself to explain what makes one individual a more effective leader than another when both receive the same behavioural training.
- *Level 3.* Leadership behaviours are also attributable to individual differences, and traits or characteristics of the leader continue to be a subject in the leadership literature (Yukl, 1981). Such traits include personality factors associated with influencing others (McClelland, 1985) and cognitive abilities such as convergent and divergent thinking (Boyatzis, 1982).
- *Level 2.* An emerging understanding in Western management looks to level 2 as the primary determinant of levels 3 and 4. This view recognizes that patterns of cognitive, social, and motivation differences are associated with stages

The authors are grateful to The Performance Group (1993a and 1993b) for the inclusion of questions on subjective experiences in their world-class performance study. The following persons have contributed to this article: Bjelland, O.; Jonassen, J.R.; Tenold, E.; Walton, K.G.

**Figure 1.** A unified theory of leadership: leadership as a function of development of consciousness



of psychological development (Drath, 1990; Kegan, 1994; Torbert, 1991). Research within this context has demonstrated that the realization of leadership behaviours is inherently constrained by the limits of such development in the individual (see next section).

- **Level 1.** Figure 1 introduces a still more fundamental level of personal transformation—development of consciousness. Development of consciousness includes within it the transformations associated with level 2, but extends the range of development potential beyond these psychological stages to higher states of consciousness. Fundamental transformations in consciousness have been found, at one stroke, to effect desirable changes not only in the developmental stages of level 2, but also in traits and characteristics (level 3), and leadership performance (level 4). The theory and practice of intervening on the level of states of consciousness is found in Maharishi Mahesh Yogi's (1969, 1972) recent revitalization of ancient Vedic psychology (dealt with later in the article).

The central principle of this approach to leadership development can be illustrated by a simple metaphor. The simplest and most effective way to promote the growth and vitality of a tree is to water its root. In a similar way, Vedic psychology explains that the single intervention of developing consciousness exerts a positive influence on the complete psychology, physiology, behaviour, and environment of the individual. We will, in this article, deal mainly with the psychological aspects of leadership. For completeness, however, the last section also discusses the physiological and social foundations of leadership.

The new research data presented in this article investigated the relationship between experiences indicating development of higher states of consciousness

(level 1) and leadership performance (level 4). An instrument to assess the degree of development of higher states of consciousness was formulated based on Vedic psychology. We predicted that more frequent experiences of higher states of consciousness would be found among some of the world's most accomplished performers, compared with comparison groups. The findings presented later provide empirical support for our unified theory of leadership based on consciousness.

It is difficult to pinpoint leaders by studying them on the more superficial levels of behaviour and individual characteristics, since they display a wide range of personal tendencies and likes and dislikes. Indeed, Drucker (1992) claims that there is no such thing as a "leadership personality". We agree with Drucker on this point. Development is not a process of becoming stereotyped or uniform. On the contrary, it is a process of differentiation. A more abstract and universal feature of leaders, our model suggests, is their heightened degree of consciousness or wakefulness. The Performance Group (1993a, pp. 17-8) arrived at a similar conclusion when comparing the world-class leaders they studied: "In fact, it is this heightened sense of 'awareness' that emerged from our analysis and evaluation of the data as the most significant similarity ... Thus it is 'awareness' which evolved as the focal point of the Model for World-Class Performance, as a result of the study".

The model in Figure 1 presents a unified theory of leadership because it shows the relationships between each level of the phenomenon of leadership. It locates a unifying, fundamental variable underlying the diverse and divergent qualities and behaviours of leaders. It suggests a radical paradigm shift in the practice of management development – from the dominant emphasis on the superficial level of behavioural skills to the deeper and more powerful level of developing consciousness.

The next section expands on the significance of level 2 in Figure 1. This is followed an introduction of the higher states of consciousness (related to level 1). These states form the basis of the research instrument which was used in our study of world-class leaders presented in the following section. The last section concludes with a practical approach to the development of leaders through the development of consciousness.

## Leadership and psychological development in contemporary management thought

What makes a leader? Despite decades of research, the field of management has not provided an unequivocal answer to this question. Critiquing existing knowledge in the field of leadership, Bennis and Nanus (1985) have

written: "Leadership is the most studied and least understood topic of any in the social sciences". They further argue that:

Decades of academic analysis have given us more than 350 definitions of leadership. Literally thousands of empirical investigations of leaders have been conducted in the last seventy-five years alone, but no clear and unequivocal understanding exists as to what distinguishes leaders from non-leaders, and perhaps more important, what distinguishes *effective* leaders from *ineffective* leaders (p. 4).

We propose that the integration of knowledge in this field can be advanced by connecting the diversity of ideas to a more fundamental, simpler theoretical foundation. Research on the individual psychological traits and skills associated with effective leadership (Boyatzis, 1982; Bray *et al.* 1974; Leavitt, 1986; McClelland, 1985; Stodgill, 1974) has generally pointed to the following characteristics: social power motivation, communication skills, critical and creative thinking, self-efficacy and inner *locus* of control, decisiveness, vision, and interpersonal competences to resolve conflicts in a constructive manner and to build team spirit and collaboration. What many of these characteristics have in common is that they are functions of a single, comprehensive dimension – self development – as has been observed by developmental psychologists such as Loevinger (1976), Maslow (1968), and Kegan (1994). Simply put, leaders are more mature. As individuals progress to higher stages of psychological development, they exhibit greater autonomy and ability to handle stress, more integration of intellect and emotions, strengthened values and purposefulness, and less self-centred perception and interaction.

Modern developmental psychology recognizes that the human personality has an extensive potential for growth. It is generally held, but not universally agreed, that this growth takes place in hierarchical stages. Each progressive stage of development brings with it broader construction of one's identity, one's world, and one's relations with others. Loevinger (1976) refers to stages of *ego or self development*, a construct which encompasses character development, moral development, social development, impulse control, cognitive complexity, and self-concept. Parallel ideas have been articulated by Kegan (1994) who identifies progressive stages of the individual self which are fundamental to experience and performance in work roles and in personal relationships. Research using instruments developed by Loevinger and Kegan have found that adults are at a variety of developmental positions and that very few adults approach the highest potentials of development they define in their models.

Kegan (1994) talks about managing as the central preoccupation in the work literature and the schools of

business, and claims that a certain degree of maturity is a prerequisite to being able to manage. He continues that one can only lead oneself and others – when one has evolved from dependence on the expectations of others to a more internal sense of order and direction. This situation "creates the self – not the present social surround – as the *source* of direction and value" (p. 168). This stage of maturation, Kegan further points out, is generally not reached by the majority of adults. Thus, there is a mismatch between the expectations of today's organizations – that all of us be self-initiating, self-evaluating, and able to conceive of the organization as a whole – and the levels of psychological development most common in adults.

Closely related to Loevinger's and Kegan's work is that of Torbert in the field of management. Torbert (1991) has examined the distribution of Loevinger's developmental stages among samples of managers, and has begun to articulate the differences in management performance that are typical of different stages. Table I shows Torbert's names and descriptions for the different stages. Loevinger's names are given in parentheses (please note that Torbert's strategist is a combination of two levels – individualistic and autonomous – in Loevinger's model). The middle column summarizes the findings of six studies involving around 500 managers. The stage distributions in this table are in accord with over 40 prior studies showing that only a small percentage of college students and adults have reached the stage which Torbert calls "strategist" (Chandler, 1991; Loevinger, 1979).

Although Torbert found no managers at his magician stage, other researchers have found that a few individuals have typically reached the related most advanced stage (integrated) in Loevinger's (1976) model. Cook-Greuter (1994, p. 124), based on tests on over 3,000 subjects, concluded that less than 1 per cent of the tested population had reached this advanced stage of self development.

Torbert's work can be summarized in Figure 2 which compares important differences in management performance between the technician stage (the modal stage in the current adult population) and the strategist stage (the stage at which true leadership begins to be possible).

The terms in Figure 2 are relative. For example, with respect to "whole", at stages of development beyond the strategist, there will be even greater wholenesses. We have used the term bureaucratic administrator to distinguish the technician from the next stage, the achiever, at which one can more appropriately be called the manager. While the achiever has the ability to fulfil

**Table I.** Torbert's descriptions of developmental stages

Stage name	Percentage at stage	Description
Opportunistic (self-protective)	2	Short-time horizon; concrete things; fragile self-control; hostile humour; externalizes blame; rejects feedback
Diplomatic	8	Conforms with rules and group norms; thinks (conformist) in stereotypes; suppresses own desire; seeks membership and status
Technician (self-aware)	45	Interest in problem solving; efficiency over effectiveness; perfectionist; evaluates self, others, and world based on craft logic; ambivalent about receiving feedback; has a longer time horizon
Achiever	36	Results-oriented; long-term goals; initiative; (conscientious) inspiration; respects individual differences; seeks mutuality rather than hierarchy in relationships; open to feedback
Strategist (individualistic + autonomous)	9	Ability to reframe situations and define new, i.e. path finding; views the situation independently; role flexibility; creative conflict resolution; concern with total organization in the environment; aware of paradox contradiction; empowers others
Magician (integrated or higher)	0	Involved in historic events or transformations; creates "positive-sum games"; able to resolve inner conflicts; broader, more comprehensive and integrative awareness; sound mental health; greatly increased creativity

already defined goals, the postconventional strategist represents the first stage that can define new goals and discern what adds value – features considered essential to leadership. Torbert found that the frequency of strategists increased at higher levels of corporate responsibility: only 3 per cent of the junior managers in his samples measured at this stage, compared with 15 per cent of those in senior management positions. It is thought-provoking that so few senior managers have reached the strategist stage, even though it is fair to assume that path finding is an essential task of executive leadership (Hoare, 1993; Leavitt, 1986).

As Kuhnert and Russell (1990) have described, developmental stage assessment can be a useful personnel practice for assessing leadership potential. These authors have also argued that focusing on the meaning-making system (another way of saying the level of development) of the leader unifies the diverse components (see underlined words below) in contemporary leadership theory:

Perhaps a more important contribution of this technique to personnel selection is an expansion of the definition of the construct of leadership... Because the meaning-making system of a leader is reflected in the *behaviors* and *outcomes* as well as the leader's perspectives on their own *characteristics* and *situational demands*, this strategy may allow us to bridge the gap among the various components and approaches to leadership (Kuhnert and Russell, 1990, p. 604).

The significance of stage assessment to leadership has also been presented by Drath (1990). Drath found that

Kegan's typology of stages explains the phenomenon of managers who "have a sincere commitment to be participative and empower their subordinates, yet cannot follow through on their commitment". Truly empowering leadership requires, according to Drath, that the leader should realize not just a stage of psychological independence, but a still higher "interdependent stage" that involves the ability "to embrace a context of meaning wider than their own identity... [where] the person can find deeper relatedness and intimacy with others without risking a loss of self in the process".

Figure 1 illustrated how characteristics of leaders (level 3) depends on the stage of psychological development

**Figure 2.** Development towards leadership

Technician	→ Strategist
Reactive	→ Proactive and preventive
Part	→ Whole
Control	→ Collaboration
Short-term	→ Long-term
Ambivalent to feedback	→ Welcoming feedback
Resistance	→ Innovation
Path following (conventional)	→ Path finding (post-conventional)
Efficiency (doing things right)	→ Effectiveness (doing right things)
"Win-lose"	→ "Win-win"
Bureaucratic administrator	→ Leader

(level 2). In the light of that model, we can see how descriptions of leaders are related to an underlying developmental dimension. For example, Garfield (1986) observes that peak performers in business have an internal source of direction and value, capacities of self-management and team building, ability to correct course, and cognition which integrates opposites – including macro and micro perspectives. Although Garfield seems to suggest that these leadership qualities can be adopted by individuals who assume an enthusiastic attitude, one cannot change oneself that simply. Just as a young child cannot assume the cognitive and social perspectives of a more mature adult, the qualities of leadership are not available without higher stages of psychological development. Similarly Bray *et al.* (1974) and Boyatzis (1982) noted that leaders exhibit cognitive competences such as innovative problem solving, and interpersonal competences such as constructive conflict resolution. Research on the implications of developmental psychology for leadership points to the conclusion that the unfolding of these characteristics is a function of a developmental skill, not just skill training and exhortation.

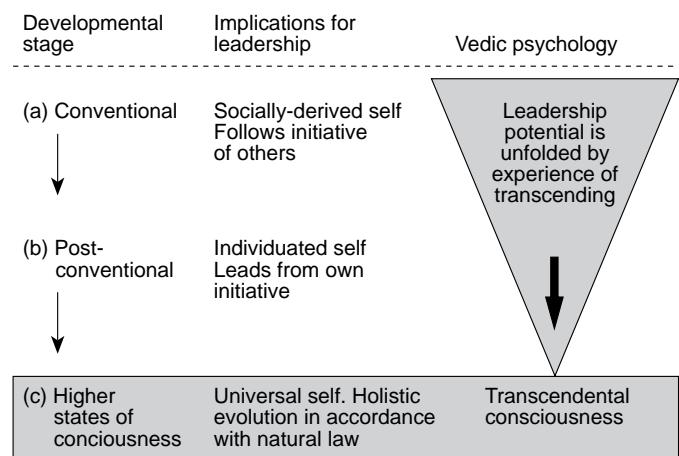
Another perspective on developmental shifts which transform cognition, motivation, and performance is that of Maslow's (1968), who described a high stage of self development which he termed self-actualization. According to Loevinger, this is essentially her integrated stage. Important positive characteristics of self-actualizers include "increased acceptance of self, of others and of nature; increased spontaneity; superior perception of reality; greatly increased creativeness" (Maslow, 1968, p. 26). In Maslow's theory, peak experiences are a defining aspect of self-actualization. These transforming experiences involve holistic cognition, resolution of polarities or conflicts, transcendence of ordinary time and space, and profound experiences of an integrated self, accompanied by feelings of bliss and wonder (Maslow, 1968, pp. 249-53). Maslow referred to these as peaks because they are valued as moments of high elevation and deep inspiration clearly set apart from ordinary life. Such experiences restructure the individual's knowledge of himself and the world, bringing about a higher stage of development and enhanced feelings of wellbeing. Maslow stated: "My feeling is that ... the power of [one peak] experience could permanently affect the attitude toward life" (1964, p. 75). An effect of such experiences is to transform the individual from deficiency motives (feelings of lack in the individual) towards "being" motives (higher values such as truth, beauty and justice). He explicitly connected leadership with these experiences of transcendence: "It is my tentative impression that I am more likely to find cognizing of transcendence...in

powerful and responsible leaders and managers" (1971, pp. 280-1).

Figure 3 presents a summary of the implications of development for leadership. A distinction is made between the white areas A and B (developmental stages from Western psychology) and the shaded area C (higher states of consciousness in Vedic psychology):

- (1) *Stage A:* In less mature stages of development one depends on the social surrounding for a sense of identity, values, and direction. These substages are collectively referred to as conventional in Figure 3. In this range of development, one does not lead others – one does not even lead oneself towards self-determined initiatives (Kegan, 1994; Torbert, 1991).
- (2) *Stage B:* Some adults, a small minority, experience personal evolution to a threshold where they become relatively autonomous, self-actualized individuals (Maslow, 1968; Torbert, 1991). Their personalities grow in an integrated way around a well-developed sense of their own distinctive or unique inner individual self, at the same time that their horizon expands to broader perspectives and responsibilities. Their intrinsic identity and values give self-initiative to their own lives. In this post-conventional range of development, one can begin to function as a leader.
- (3) *Stage C:* Even though the framework of stage B clearly represents progress with respect to stage A, the developmental paradigm in Western psychology and management still has two major shortcomings:
  - The theoretical model is not complete. Maslow's (1968) "peak experiences" represent momentary access to further transformations than that represented by A and B in Figure 3.

**Figure 3.** Progressive unfolding of leadership



In fact, the commonly understood developmental range falls far short of several higher states of consciousness (C in Figure 3) which dramatically extend the range of development as commonly understood in Western psychology (Alexander *et al.*, 1990; Alexander *et al.*, 1994). Such advanced development brings with it the potential for profound leadership.

- Recognizing the determining influence of development is not enough to change the practice of leadership, because the degree of growth has generally been seen to be a stable individual difference which is not subject to change after adolescence. The last point, which is probably the most important, illustrates the crucial distinction that needs to be made between theory and practice. The theoretical recognition of a developmental potential is in itself not enough. We posit that the fundamental root of leadership shortage is that Western management has lacked knowledge of how development can be realized *in practice*.

In the next section we will describe a developmental model which incorporates and unifies the two challenges just raised.

### **Higher states of consciousness in Vedic psychology**

In the East there are long traditions of techniques of meditation to cultivate advanced human development. In particular, the Vedic tradition of India represents the most ancient and extensive knowledge about consciousness and techniques for its developmental (Vedic knowledge is also reflected in the most ancient understanding in other cultures (Basham, 1959; Harung, in press). However, the practicality of this knowledge to enhance our quality of life and performance has in general been lost and/or misinterpreted.

Vedic knowledge has been recently brought to light and systematized by Maharishi Mahesh Yogi (1969, 1972) in a clearly delineated theory of higher states of consciousness, and in practical and standardized procedures to unfold those states. The term Vedic psychology is used throughout this article to refer specifically to Maharishi's presentation of traditional Vedic knowledge. According to this tradition, the most fundamental level of the human mind is transcendental consciousness – a unified state in which consciousness is fully awake to itself alone, beyond the boundaries of thought and feeling, and beyond any division of subject and object.

In the cone on the right side of Figures 1 and 3 are the words "leadership potential is unfolded by the experience of transcending". In Maslow's (1968, 1971) concept of peak experiences we have already seen that momentary experiences of transcending polarities play an essential role in transforming a person towards higher levels of development. Maslow found that those subjects who have more frequent peak experiences are more likely to be creative leaders. But peak experiences are spontaneous and ephemeral states of awareness. They cannot be readily created, and consequently the developmental transformations which they sometimes catalyse are also outside control.

The transcendental meditation technique from Maharishi's Vedic psychology provides a systematic and repeatable procedure which enables the conscious mind to experience transcendental consciousness. Systematic experience of transcending through this technique is associated with transformation toward post-conventional, self-actualized stages of development on the way to still more developed phases which Vedic psychology calls higher states of consciousness.

An outline of the seven states of consciousness described by Vedic psychology (Maharishi, 1972) is given in Table II. Each of these states of consciousness is distinct from every other state, both phenomenologically and physiologically. The common everyday experience is that of the first three states of consciousness: waking, dreaming, and deep sleep. The substages of development described by contemporary Western psychology – even the strategist and self-actualized level can be regarded as within the range which Vedic psychology calls the waking state of consciousness. Our research on world-class leaders concerns growth of the fourth and fifth

**Table II.** *States of consciousness in Vedic psychology*

State of consciousness	Transcendental awareness or	Awareness of objects
1. Deep sleep	No	No
2. Dream	No	Illusionary
3. Waking	No	More expressed values
4. Transcendental consciousness	Yes	No
5. Cosmic consciousness	Yes	More expressed values
6. Refined cosmic consciousness	Yes	Sublest value
7. Unity consciousness	Self and object in terms of the same transcendental value	

states. The most advanced states six and seven are beyond our scope here.

#### ***Transcendental consciousness (fourth state of consciousness)***

Transcendental consciousness is experienced as a state of restful alertness, silent wakefulness. Vedic psychology describes it as:

A state of inner wakefulness with no object of thought or perception, just pure consciousness aware of its own unbounded nature. It is wholeness, aware of itself, devoid of differences, beyond the division of subject and object – transcendental consciousness. It is a field of all possibilities, where all creative potentialities exist together, infinitely correlated but as yet unexpressed. It is a state of perfect order, the matrix from which all the laws of nature emerge, the source of creative intelligence (Maharishi, 1976, p. 123).

Vedic psychology explains that this undivided wholeness of awareness is called the absolute (unmanifest, unconditioned, and universal) self to distinguish it from the relative (manifest, limited, and individual) self:

Self has two connotations: lower self and higher Self. The lower self is that aspect of the personality which deals only with the relative aspect of existence... the mind that thinks, the intellect that decides, the ego that experiences... The higher Self is that aspect of the personality which never changes, absolute Being, which is the very basis of the entire field of relativity, including the lower self (Maharishi, 1969, p. 339).

Transcendental consciousness is said to be a natural state of awareness, intrinsically available to all human beings. Whereas transcendental meditation (see last section) is a technique to allow the mind to experience it systematically, there are certainly also recorded instances of spontaneous experiences of this state throughout history. Maslow (1968, 1971) documented a number of peak experiences, and the British poet Alfred Lord Tennyson described his own spontaneously occurring experience of transcendence:

All at once, as it were out of the intensity of the consciousness of individuality, the individuality itself seemed to dissolve and fade away into boundless being, and this not a confused state, but the clearest of the clearest, the surest of the surest ... utterly beyond words (Tennyson, 1899, p. 268).

#### ***Cosmic consciousness (fifth state of consciousness)***

The fifth state is called cosmic consciousness because it is inclusive of the continuous experience of transcendental consciousness along with the changing states of waking, sleeping, and dreaming. In cosmic consciousness the silent wakefulness of transcendental consciousness is permanently integrated with active living. One's sense of "who I am" becomes primarily situated in pure consciousness, the higher self. Thus one's identity is no longer attached to the thoughts, feelings, and behaviour of the lower self:

The activity assumed by an ignorant man to belong to himself – to the subjective personality that he calls himself – does not belong to his real self, for this, in its essential nature, is beyond activity. The self, in its real nature, is only the silent witness of everything (Maharishi, 1969, p. 98).

Action in this higher state of consciousness is said to become spontaneous right action. One of the greatest tennis players in the history of the sport, Billie Jean King reports the following experience suggestive of growth towards the state of cosmic consciousness:

It almost seems as though I'm able to transport myself beyond the turmoil on the court to some place of total peace and calm. Perfect shots extend into perfect matches ... I appreciate what my opponent is doing in a detached abstract way. Like an observer in the next room ... It is a perfect combination of [intense] action taking place in an atmosphere of total tranquillity. When it happens I want to stop the match and grab the microphone and shout that's what it's all about (King and Chapin, 1974, p. 199).

Characteristics of transcendental consciousness co-existing with activity are indicated by words such as "beyond the turmoil on the court" in "some place of total peace and calm". Even though she is performing with great dynamism, she feels "detached" from the field of action "like an observer in the next room". This suggests that the silent observing or witnessing of the activity has become stabilized to a considerable degree. Consistent with the predicted association of spontaneous right action with the growth of cosmic consciousness, her play is perfect: "perfect shots extend into perfect matches ... perfect combination of action taking place in an atmosphere of total tranquillity".

Extensive research on the physiological and psychological correlates of transcendental consciousness and cosmic consciousness have been summarized by Alexander *et al.* (1990) and Alexander (1993). Restful alertness during transcendental consciousness is distinguished from the aroused alertness characteristic of waking by decreases in respiration rate, skin inductance level, and blood lactate which are greater than those found during eyes closed rest; along with elevated alpha EEG coherence (an indicator of neurophysiological integration). Physiological indicators of growing cosmic consciousness include significantly lower baseline levels of the following parameters even during daily activity: spontaneous galvanic skin response (a measure of nervousness), respiration rate, heart rate, and plasma lactate (a stress-related hormone). Such development is also characterized by greater EEG coherence during moderate activity; enhanced autonomic stability during mental tasks or in responses to stressors. Another indicator of cosmic consciousness is the ability to maintain silent inner wakefulness even during the inertia of deep sleep, called witnessing sleep. Both

surveys and longitudinal studies indicate that increased frequency of experiences of witnessing are positively correlated with measures of self-actualization, creativity, practical intelligence, fluid intelligence, and choice reaction time.

Action performed in cosmic consciousness appears to bear some similarities to Csikszentmihalyi's (1991) notion of flow experiences, which are said to involve harmony, enjoyment, loss of ego, and acting with total focus. However, his experiences are ephemeral moments (like peak experiences) which depend on the special conditions of the activity in which one is engaged (i.e. a challenging task, but not so challenging that it outstrips one's level of competence). In contrast, cosmic consciousness is defined as a fully stabilized state of blissful silent inner wakefulness. This permanent transformation of the nervous system is maintained irrespective of outer conditions (be they challenging or boring; pleasant or unpleasant).

developing full alertness, full creative intelligence, and full support of nature. The term support of nature is explained as "a state, where, by virtue of a high development of mental strength and harmony with the laws of nature, [one] finds that his thoughts naturally become fulfilled without much effort on his part" (Maharishi, 1969, p. 133). Support of nature may appear to those without prior exposure to this concept as increasing "fortunate coincidences" – a factor to which many leaders attribute their success (Kouzes and Posner, 1987). However, support of nature is not random or undeserved luck, but is said to result from the development of consciousness and action in harmony with nature.

The research study reported next provided an opportunity to explore the theory that exceptional performance is related to development of consciousness, whether that development is spontaneously occurring, shaped by significant life events, or cultivated through systematic procedures. We hypothesized that subjects who had been selected as world-class leaders would tend to report more frequent experiences of transcendental consciousness, cosmic consciousness, and support of nature. The findings supported our hypothesis and encourage further research into the relationship of leadership to the development of consciousness.

## Performance is said to be in accordance with "the power of Nature"

Figure 3 depicts leadership in cosmic consciousness as occurring from a fundamentally different platform of development than the self-initiating leadership of a post-conventional, self-actualized individual. Performance in higher states of consciousness is not merely the expression or actualization of unique individual talents, but rests on the unfolding of the universal self-transcendental consciousness. In the analysis of physicist John Hagelin (Hagelin and Herriott, 1991) transcendental consciousness has properties identical with the unified field of natural law underlying physical creation; thus experience of this state aligns the mind of the individual with the holistic functioning of natural law. According to Maharishi (1969), leaders in higher states of consciousness act with universal love for the welfare of the world, "motivated not by selfish individuality but by cosmic purpose" (p. 209). On this platform, performance is said to be in accordance with "the power of Nature, which is the cause of the vast and incessant activity of creation and evolution throughout the cosmos" (p. 284). In his theory Z, Maslow (1971, p. 285) discusses a related notion of development *beyond self-actualization* to "transhumanism (centering in the cosmos rather than in human species)".

The growth of higher states of consciousness is said to provide a foundation for success in management by

## Experiences of higher states of consciousness in world-class leaders

A research investigation was conducted in association with the World-class Performance Study by The Performance Group (1993a, 1993b), whose collaboration is gratefully acknowledged. The intent of The Performance Group was to study the "experiences, attitudes, work habits, techniques, and insights" of a number of "world-class" performers – "people selected because they are widely acknowledged to be among the best in their respective fields" (1993b, p. 7). These subjects were all international leaders of group activities in a wide spectrum of fields, such as performing arts, business, government, and education. The Performance Group (1993a) reported a qualitative analysis based on interview from 36 world-class subjects. In addition, the subjects were asked to after the interview to fill in our brief questionnaire and then mail it in; some questionnaires were not returned. Our analysis, reported below is based on completed questionnaires returned by 22 of these subjects.

### Instrument

We designed four questions based on higher states of consciousness as described in Vedic psychology. The brief questionnaire had these instructions:

The following questions ask you to recollect subjective experiences which you may have had. Take your time to try to recall examples of the types of experiences which are described. If an experience is not familiar to you, mark 1, "Never to my knowledge" on the frequency scale (Cranson *et al.*, 1991).

The subjects had to chose from a wide range of frequencies, as shown below. For each experience, subjects were asked to mark the frequency and write an example from their experiences. The 11-point scale was used to allow the data from this sample of world-class performers to be compared to other samples who had previously responded to some of the same questions using the same scale (Cranson *et al.*, 1991). The frequency scale is as follows:

- 11 all the time;
- ten most of the time;
- nine once a day;
- eight once a week;
- seven once a month;
- six once in three months;
- five once in six months;
- four once a year;
- three less than once a year;
- two once in my lifetime;
- one never to my knowledge.

### **Findings**

The first question was based on the experience of inner silence on its own, or transcendental consciousness:

Have you experienced a perfectly peaceful state in which the mind is very awake, but still; a state when awareness seems expanded beyond the boundaries of thought, beyond the limits of space and time?

The mean response from 19 subjects was 4.6 (nearly once every six months); eight of 19 subjects (36 per cent) indicated a frequency of at least once a week. Some of the subjective experiences were:

Listening to classical music either at home or in a concert. During summer months in our summer place on the lakeside. During leisurely meals with my wife.

When I was younger this happened to me frequently in my daily meditation. Today it is a gift I receive in certain liturgical celebrations where the faith, the piety and the suffering of the participants touch me deeply.

Occasionally when alone, meditating and relaxing in the mountains, the peace and calm is absorbed into me and I feel the strength of the mountains and the weakness of mankind.

When necessary during competition.

When I write. I write poetry (published).

The next question was formulated to test experiences suggesting the growth of cosmic consciousness – inner silence during activity:

Have you experienced that while performing activity there was an even state of silence within you, underlying and coexisting with activity, yet untouched by activity? This could be experienced as detached witnessing even while acting with intense focus.

The mean response from 22 subjects was 5.4 (once every few months); ten subjects (45 per cent) reported having the experience once a week or more frequently, and eight at least once a day (36 per cent). Some examples given were:

I am aware of this all the time and I use it sometimes to check myself and my performance.

There is a deliberate attempt to try to take an outsider's view in the most hectic work period. Step aside – detached witnessing is a good description of the phenomenon.

In all of the important decisions that I have had to make ... especially in the defence of human rights. During twenty years this was a daily recurrence. Now it would be more or less monthly.

During my election I viewed it from both the perspective of a participant and also from a social perspective, almost at a distance.

The first two questions are intended to reflect a sequential unfolding from temporary experiences of transcendental awareness during quiet moments (question 1) to experiences of this state maintained even during activity (question 2). On this basis, one would expect more frequent experiences of the former. Since this was not the case, we give two possible reasons. First, it is apparent from the subject's quotations that the experience of transcendence is often associated with more exceptional circumstances (i.e. physically removed from home to some quiet or scenic place, listening to a concert, during celebrations, etc.). However, such quiet moments are rare in their highly demanding lives (it is a systematic opportunity for retiring fully from the domain of activity, during the normal setting of life, that is provided by twice daily practice of transcendental meditation – see the last section). Second, some of the responses to question 2 may not reflect the full experience of transcendental awareness coexisting with activity. Hence responses may be overestimated.

An additional question was designed to test experiences of inner wakefulness during sleep:

During deep sleep, have you ever experienced a quiet, peaceful, inner wakefulness? You awake fresh and rested, but with a sense that you had maintained a continuity of silent self-awareness during sleep.

This item did not receive as many high frequency responses – the mean response to this question was 3.2 (three = less than once a year). This lower frequency was

expected, since maintenance of transcendental consciousness even during the inertia of sleep is said to require a higher degree of growth of cosmic consciousness (Maharishi, 1969).

The fourth question was related to the experience of fortunate coincidences:

Have you experienced that your desires and wishes are fulfilled in a way that seems to be caused by fortunate coincidences or good luck? You may have experienced that circumstances come about without your direct action, to fulfil your desires.

The mean response of our world-class sample was 3.9 (almost once a year). Sample experiences included:

I have been generally a lucky individual... You need luck in order to be fully successful...

When facing business problems that I cannot see a solution [to], another... initiated an action which results in that problem being removed or solved.

[I] received a 1.6 million federal grant after following up on a... tip from an accidental encounter...

### **Comparison with other samples**

This first phase of The World-class Performance Study has not involved any control groups; we can, however, compare the frequency of reported experiences to findings with previous samples who have responded to the same questions. Cranson *et al.* (1991) used question 3 (transcendence or inner wakefulness during sleep) in an investigation of the relationship between measures of intelligence and experiences of higher states of consciousness. Fifty-five university students who served as a comparison group in Cranson's study reported average post-test frequencies of 1.6, significantly lower than the mean of 3.2 for our subjects ( $t = 2.27, p = 0.026$ ).

In addition, two of the questions were used with another sample of 68 subjects in an ongoing programme to evaluate personal development of college students. On question 3, the average for the students was 2.7 compared with the 3.2 mean of the world-class sample. On question 1 (transcendental consciousness) the average for the student sample was 1.8 compared with 4.6 for our subjects. Differences in the overall pattern of response between the world-class sample and the larger student sample were analysed using a chi-square statistic. This instrument compared three categories of responses within each sample: those reporting frequencies of once a week or more, those reporting never, and those in-between. This test was highly significant ( $\chi^2 = 17.92, p < 0.001$ ). Frequencies of responses to question 1 are further compared in Table III.

There is a difference in the two groups in terms of age because most of the world-class subjects were above 40.

Since students are reported to have at least as frequent momentary transcendental experiences as older subjects (Wulff, 1991), and since Csikszentmihalyi (1991) has found that age is not a factor in experiences of flow, we have no reason to expect that the age factor alone would account for the differences reported above.

Seventy-seven per cent of the world-class leaders responded at least "once a year" or more to at least one of the three questions about higher states of consciousness (questions 1-3). For question one, 56 per cent responded to "at least once in life" (see Table III). These findings can be contrasted to related research which used different instruments to assess frequencies of peak experiences. Estimates of how many people have had peak experiences at least once in their lives vary, depending on how the questions have been asked (see review in Alexander *et al.*, 1991). One stringent study found that only 2 per cent of those tested had had transcendental experiences even once in their lives (Thomas and Cooper, 1977).

With respect to question two, an exceptional 45 per cent of the world-class subjects (ten of 22) reported experiences of silence in activity with a frequency of "at least once a week", and 36 per cent (eight of 22) responded that it was a daily occurrence. In comparison, a week-long investigation of more than 100 men and women working full-time at a variety of occupations, where over 4,800 responses were collected, found that less than 1 per cent of the responses were flow experiences (Csikszentmihalyi, 1991).

The studies of peak experiences and flow experiences are not strictly comparable to the states of consciousness concept investigated here. Since peak and flow experiences probably are precursors to higher states of consciousness, the real difference in the two groups may indeed be larger than indicated by the comparison of frequencies. On the other hand, Csikszentmihalyi's way of sampling here may tend to underestimate the frequency of flow experiences. Nonetheless, we conclude that these findings reinforce the point that heightened consciousness is far more common among world-class performers than in the general population.

### **Directions for additional research**

In the present study we observed that not all the world-class performers reported experiences of higher states of consciousness. The complete range of frequencies were reported included five subjects who replied "never" to all the questions. It would be interesting to explore additional types of data about these subjects to see if differences among the world-class subjects on these questions correlate with other within-group differences on other measures. According to Maslow (1968) there are people with exceptional specific talent who are not

**Table III.** Higher frequency of transcendental consciousness (question 1) in world-class subjects than students

Frequency	Percentage of world-class sample	Percentage of student sample	Ratio between groups
Every day or all the time	17	1.5	11:1
At least once a week	44	6	7:1
At least once in life	56	18	3:1

self-actualized. World-class performers who scored low on our questions may have been of this category. Maslow also found that the more widespread creativity, displayed in more than one area of life, covaries with self-actualization. We would expect that those subjects with higher frequencies of higher states of consciousness were enjoying greater general creativity and more balanced fulfilment, in addition to their professional accomplishments in a specific area.

As the initial study of world-class performers did not involve a control group, these preliminary findings can be strengthened by collecting comparison data from average performers from the same professions and cultural groups. Qualitative explorations of experiences of support of nature could also be a rich direction for further research.

There are limitations to relying solely on a brief self-report questionnaire such as was employed in this preliminary exploration of the relationship between higher states of consciousness and leadership. Subjects are not used to evaluating these subjective states, and the possibility cannot be avoided that they apply different interpretations to the questions, as is evident from their quotations. We suggest that further studies of higher states of consciousness and leadership utilize multiple criteria of both the dependent variable – world-class leadership and the independent variable – state of consciousness. Additional measures of world-class leadership could include peer evaluation, biographical data, and evidence of performance; while development of consciousness could also be assessed by open-ended questions, psychophysiological measures, and cognitive-behavioural criteria. Our adjunctive role in the World-class Performance Study did not provide us with the opportunity to implement additional measures with these subjects. Despite limitations, this study makes a significant contribution to testing the theory of Vedic psychology, especially when these findings are considered together with related research on the psychological, physiological and behavioural correlates of the development of higher states of consciousness.

### An applied approach to the development of higher states of consciousness

Previous sections of this article have established a *correlation* between experiences of higher states of consciousness and higher levels of leadership potential. However, this leaves two major questions. First, the world-class study does not establish a *causal* relationship. The unanswered question remains, does higher states of consciousness provide the foundation for leadership ability, or is the causality the opposite way? Second, assuming that we can conclude that development of consciousness is the *independent* variable and leadership potential the *dependent* variable, how can we effectively promote such development in practice? This is an important question, since it is generally held that achieving advanced self-development is difficult (Drucker, 1967; Loevinger, 1976; Torbert, 1991). Indeed, Maslow (1968, p. 166) observes that "Self-knowledge and self-improvement is very difficult for most people. It usually needs great courage and long struggle". In spite of this, it is our opinion that the developmental potential outlined in the previous section is not something restricted to a selected few. On the contrary, leading thinkers have believed that it may be, in principle, generally available (e.g. Maslow, 1968). This means that by accelerating the development of consciousness, it should be possible to satisfy the accelerating need for more leaders who can meet the new organizational challenges of the twenty-first century.

In order to address both questions satisfactorily, this final part will examine in some detail the research on the influence of systematic transcending to the development of higher states of consciousness. We will be continuing our focus primarily on the development of the psychological prerequisite for leadership. In addition, we will introduce the equally important physiological and sociological factors.

### Psychological foundation of leadership

The data of the present study indicate that more frequent experiences towards higher states of consciousness characterize the individuals who were selected on the basis of their reputation as world-class leaders. We interpret these findings as supporting our model that the

unfolding of leadership potential is related to the growth of consciousness. In Figures 1 and 3 we have identified transcending as a mechanism to stimulate development of consciousness. This mechanism is systematically facilitated by the transcendental meditation technique (Alexander, 1993; Maharishi, 1966). Transcendental meditation (TM) is described as an effortless procedure for allowing active awareness to settle down gradually so that a silent, unbounded, and unified state of transcendental consciousness can be directly experienced. This settling down allows the mind and body to gain profound relaxation, dissolving the success that blocks the expression of inherent potential. Because this technique is taught in a uniform fashion throughout the world, it is suitable to systematic research; it is, in fact, the most highly researched meditation technique (Alexander, 1993).

Longitudinal studies have found the systematic cultivation of transcending through this technique does indeed lead to more frequent experiences of higher states of consciousness and the cultivation of abilities important for effective leadership. Cranson *et al.* (1991) investigated the relationship between measures of intelligence and experiences of higher states of consciousness. He tested students at Maharishi International University (MIU) and another university and then retested them two years later. The 55 control students did not improve significantly during this period on any measure. The 45 MIU students practised transcendental meditation and the Transcendental Meditation-Sidhi programme (an advanced meditation practice). Their average response to question 3 on "witnessing sleep" increased from 2.9 to 4.7. At the same time their scores on IQ and reaction time tests also improved significantly, compared with controls. Scores on the intelligence and reaction time tests were correlated with the growth of higher states of consciousness, as measured by the question on witnessing sleep. The mean frequency of witnessing sleep in Cranson's meditating students was lower at pretest than the mean frequency found in the the world-class sample, but increased over two years to a higher mean than that of the world-class performers.

We have shown that ego or self-development typically does not change after high school, and that very few adults reach the post-conventional stages, which are deemed to be critical to leadership. Therefore, we wanted to test whether systematic transcending could provide developmental shifts to these mature stages. A ten-year longitudinal comparative study of ego development (Alexander *et al.*, 1994; Chandler, 1991) employed Loevinger's standard sentence completion test, a non-fakable projective instrument with well-established validity and reliability (Loevinger, 1979). A sample of meditating students at Maharishi International University were pre-tested and post-tested over a period of ten years, and compared with alumni of three

other colleges who took part in the same testing programme.

The MIU sample increased significantly in self-development by 0.91 steps (1.0 corresponds to one step in Table I) compared with the control groups,  $t(131) = 5.3$ ,  $p < 0.000001$ , even though the meditating subjects had relatively high scores at pre-test, making further advance more difficult. It is striking that 53 per cent of the MIU sample scored at or above the strategist (individualistic) stage at post-test, compared with only 3 per cent of the junior managers and 15 per cent of those in senior management positions in Torbert's (1991) research. The significance of the TM group is highlighted by the fact that almost all of Torbert's strategist subjects in fact were measured at the individualistic stage, while out of the 53 per cent in Chandler's study, the majority (38 per cent of all subjects) achieved fully post-conventional (autonomous or integrated) phases. This 38 per cent was up from 9 per cent at pretest, compared with 1 per cent of control samples at both pretest and post-test.

## A shortened form of Loevinger's test was administered

To explore whether advanced TM subjects may actually score at even higher levels of self-development than were estimated by the standard sentence completion test, a shortened form of Loevinger's test was administered to a select group of 45 male, long-term practitioners of the Transcendental Meditation and TM-Sidhi programme, most of whom were graduates of an MBA programme at Maharishi International University. The modified format increased space for responses and encouraged subjects to "give the reader an idea of who you are and of what your inner experience is". Under these modified conditions, 77 per cent scored at or above the strategist stage, of which 55 per cent scored at the fully post-conventional autonomous and integrated stages.

As already noted, the integrated stage is described by Loevinger (1976) as equivalent to what Maslow (1968) calls self-actualization. Other evidence that transcendence through TM promotes development of self-actualization is found in a comprehensive statistical meta-analysis of 42 independent outcomes (Alexander *et al.*, 1991). In these studies self-actualization was measured by such standardized questionnaires as the Personal Orientation Inventory. The effect size (ES) on standard deviation units of TM on overall self-actualization (ES =

0.78) was approximately three times as large as that of other forms of meditation ( $ES = 0.26$ ) and relaxation ( $ES = 0.27$ ), controlling for duration of treatment and strength of experimental design ( $p < 0.0002$ ). The magnitude of these differential effects indicates that the results are not merely due to stylized relaxation, expectation or other motivational effects – suggesting that systematic transcendence is the key factor.

Since world-class leaders reported more frequent experiences of higher states of consciousness, and since meditators are developing towards higher frequencies of this type of experiences, then it follows that TM develops a fundamental quality which distinguishes leaders. Indeed, other indicators of personal maturity, associated with leadership, have been found to change over time with the practice of TM – e.g. practical intelligence, field independence, moral development, positive affect, self-esteem, and low anxiety (for a review, see Alexander, 1993). Direct evidence that TM develops managers also comes from studies conducted on meditating personnel in several occupational settings. In particular, a study by Alexander *et al.* (1993) found that TM practitioners improved significantly more than controls on such parameters as decreased trait anxiety, job tension, and fatigue; enhanced employee effectiveness, job satisfaction, and work/personal relationships. A review of other investigations conducted within business is provided by Schmidt-Wilk *et al.* (in press).

### **Physiological foundation of leadership**

A possible criticism of self-reported frequency of higher states of consciousness among meditators is that their responses may in part reflect their intellectual training and expectations. Since states of consciousness have corresponding physiological correlates, greater validity can be added to studies of higher states of consciousness by employing physiological measures in conjunction with phenomenological reports. EEG measurements during sleep have been performed on meditating subjects who report frequent experiences of witnessing sleep, as an indicator of growing cosmic consciousness. The subjective reports of these subjects are supported by a distinct EEG pattern of theta and alpha spindles (similar to those seen during transcendental consciousness in TM) superimposed on slow delta waves characteristic of deep sleep. These results are interpreted as evidence of the growing capacity to maintain inner awareness during sleep (Mason *et al.*, 1990).

There is also evidence that the cultivation of higher states of consciousness develops a neuroendocrine mechanism for leadership. TM has been found to cultivate higher levels of the neurotransmitter serotonin (Walton and Levitsky, 1994). In humans, low levels of serotonin are known to be associated with stress-related diseases and behavioural disorders. In a pioneering pilot study relating

biochemistry and management, Gelderloos *et al.* (1988) discovered a correlation between high levels of serotonin, positive scores on the Leadership Ability Evaluation, and work performance.

Research on baboons also suggests that serotonin may be a biochemical correlate of leadership. Sapolsky (1990) found that baboon leaders had higher serotonin levels than followers. In addition, Sapolsky discovered that, contrary to the common belief that leaders are aggressive and domineering, the most effective leaders tended to be mellow and controlled. In fact, they derived their power more through building good relationships than from suppressing and manipulating their opponents.

### **Sociological foundation of leadership**

Leadership depends on not just the psychology and physiology of the individual leader, but also the social context in which the leader operates (House and Mitchell, 1974; Kotter, 1985; Yukl, 1981). Just as a good crop depends not only on a strong seed but also on a fertile ground, so the achievement of a leader depends not only on his or her own level of awareness, but also on the level of "collective consciousness" (Maharishi, 1986) of his or her social system. Collective consciousness is a wholeness or Gestalt which influences and is influenced by the individual consciousnesses of its constituent members. According to Vedic psychology it is the prevailing collective consciousness which is the *prime mover* of the effectiveness of leadership of society. This means that even if the individual leader has great leadership potential, he can only implement it to the extent that his society permits and deserves.

Applying this concept of collective consciousness to the execution of leadership in an organization, Gustavsson and Harung (1994) have pointed out that the level of development of collective consciousness shapes the shared and often tacit cultural meanings, assumptions, and values which exert a powerful influence on both individual and collective behaviour. As a consequence, the development of a single social field shared by all members of an organization – collective consciousness – may be fundamental to lasting and holistic change in organizations.

The alternative approach, of trying to change the parts to affect the whole, has frequently been found to be futile. For example, as the National Research Council (1994, p. 6, 299) observed, changing one isolated aspect of an organization almost never results in a substantial change in organizational performance. This lack of company-wide improvement despite enormous economic investments, has been termed the "productivity paradox". Such transformations may require a complex of supporting changes in other aspects of the organization and may be in opposition to norms of an organizational culture which tends to maintain itself.

Owing to the general lack of comprehensive and effective strategies, it has normally been found that it is very difficult to enhance organizational culture and performance (Gustavsson and Harung, 1994). Because collective consciousness is a Gestalt which is more than the sum of its parts, when the wholeness of collective consciousness changes, all the sub-systems change together. The approach of developing collective consciousness may thus be a means to overcome the productivity paradox and the failure of change efforts which the National Research Council has observed.

The possibility of changing collective behaviour by intervening in collective consciousness has been shown in over 40 studies on large social systems such as cities and nations. These studies have observed "a field effect of consciousness" throughout the system when only a small proportion[1] of its members practise the transcendental meditation technique and the advanced Transcendental Meditation-Sidhi programme. On the scale of society as a whole, the group practice of these procedures has been related to collective effects such as reductions in crime, violent conflict, accidents, inflation and unemployment (Orme-Johnson *et al.*, 1988), and is posited to be the basis of fulfilling economic progress (Hagelin and Herriott, 1991).

Within organizations, Gustavsson and Harung (1994) reported the following group changes in a top management team after the majority of the members started the practice of TM: greater clarity about company goals, better group spirit, and more creative climate. Other investigators have found that the practice of these procedures has been associated with company-wide benefits such as reduced absenteeism and work injuries; and instances of breakthrough increases in productivity, sales, and profitability (Schmidt-Wilk *et al.*, in press).

The collective development caused by just a few individuals transcending, clearly underlines the potential for breakthrough enhancement in organizational performance. Even when these individuals as a rule are not in higher states of consciousness, the whole organization can undergo a major transformation in collective consciousness. In organizations where many or even all of the members enjoy higher states of consciousness, we would expect unprecedented characteristics. Ultimately, Harung (1994, in review) envisages "management by automation – MBA" as the organizational reality where the enlightened members and teams are fully self-managing.

The research presented above answers the two questions with which we started in this section. First, the development of one parameter – consciousness – is causal to growth in a large spectrum of features fundamental to leadership. Second, it is possible to realize holistic growth

within psychology, physiology, and sociology in practice. It is on this foundation of research that we propose our unified theory of leadership.

## Conclusion

In any discipline of knowledge, progress towards more unified understanding comes by uncovering simpler, more profound levels which underlie and integrate the greater diversity and complexity of more superficial, expressed levels. An example of this is the progressive unification of physics as it has advanced toward unified field theories (Hagelin and Herriott, 1991). Similarly, this article has presented a model, based on Vedic psychology, which locates a single causal variable – development of consciousness – that enhances all the more expressed aspects of leadership. In fact, such a holistic growth not only improves psychological characteristics of leaders, but also physiological qualities and the social field in which the leader is operating.

The new paradigm of leadership is supported by data which indicate that those leaders selected as world-class performers have more frequent experiences of higher states of consciousness than comparison groups. The application of Vedic psychology to management, recently formulated as Maharishi's Natural Law Based Management, maintains that by tapping the latent human potential in organizations and society we should be better able to address the numerous problems that so far have been plaguing private and public management. Through Vedic psychology's approaches to cultivate higher states of consciousness, world-class performance of individuals and organizations can become the rule, rather than an exceptional phenomenon.

## Note

1. Research on cities and nations has observed a threshold effect when 1 per cent of the social system practises transcendental meditation or the square root of 1 per cent practises the Transcendental Meditation-Sidhi programme in a group. For organizations, the threshold percentage is expected to be higher because the population is smaller – 1 per cent of an organization of 100 is only 1 person.

## References

- Alexander, C.N. (1993), "Transcendental meditation", in Corsini, R.J. (Ed.), *Encyclopedia of Psychology*, 2nd ed., Wiley Interscience, New York.
- Alexander, C.N., Davies, J.L., Dixon, C.A., Dillbeck, M.C., Drucker, S.M., Oetzel, R.M., Muehlman, J.M. and Orme-Johnson, D. (1990), "Growth to higher stages of consciousness: Maharishi's Vedic psychology of human development", in Alexander, C.N. and Langer, E. (Eds), *Higher Stages of Human Development: Perspectives on Adult Growth*, Oxford University Press, New York, NY, pp. 286-341.

- Alexander, C.N., Heaton, D.P. and Chandler, H.M. (1994), "Advanced human development in the Vedic psychology of Maharishi Mahesh Yogi: theory and research", in Miller, M. and Cook-Greuter, S. (Eds), *Transcendence and Mature Thought in Adulthood*, Rowman and Littlefield, Lanham, MD, pp. 39-70.
- Alexander, C.N., Rainforth, M.V. and Gelderloos, P. (1991), "Transcendental meditation, self-actualization and psychological health: a conceptual overview and statistical meta-analysis", *Journal of Social Behaviour and Personality*, Vol. 6 No. 5, pp. 189-247.
- Alexander, C.N., Swanson, G.C., Rainforth, T.W., Carlisle, T. W., Todd, C.C. and Oates, R.M. Jr (1993), "Effects of the transcendental meditation programme on stress reduction, health, and employee development: a prospective study in two occupational settings", *Anxiety, Stress, and Coping*, Vol. 6, pp. 245-62.
- Basham, A.L. (1959), *The Wonder That Was India*, Grove Press, New York, NY.
- Bass, B.M. (1985), *Leadership and Performance beyond Expectations*, Free Press, New York, NY.
- Bennis, W. and Nanus, B. (1985), *Leaders, the Strategies for Taking Charge*, Harper & Row, New York, NY.
- Boyatzis, R.E. (1982), *The Competent Manager*, Wiley, New York, NY.
- Bray, D.W., Campbell, R.J. and Grant, D.L. (1974), *Formative Years in Businesses: A Long-term AT&T Study of Managerial Lives*, John Wiley, New York, NY.
- Carnevale, A.P. (1990), *America and the New Economy*, Government Printing Office, Washington, DC.
- Chakraborty, S.K. (1995), *Ethics in Management: Vedic Perspective*, Oxford University Press, Delhi.
- Chandler, H.M. (1991), "Transcendental meditation and awakening wisdom: a ten-year longitudinal study of self development", *Dissertation Abstract International*, Vol. 51, p. 5,048B.
- Cook-Greuter, S. (1994), "Rare forms of self-understanding in mature adults", in Miller, M. and Cook-Greuter, S. (Eds), *Transcendence and Mature Thought in Adulthood*, Rowman and Littlefield, Lanham, MD.
- Cranson, R.W., Orme-Johnson, D.W., Dillbeck, M.C., Jones, C.H., Alexander, C.N. and Gackenbach, J. (1991), "Transcendental meditation and improved performance on intelligence-related measures: a longitudinal study", *Journal of Personality and Individual Differences*, Vol. 12, pp. 1,105-16.
- Csikszentmihalyi, M. (1991), *Flow: The Psychology of Optimal Experience*, Harper Perennial, New York, NY.
- Davidow, W.H. and Malone, M.S. (1993), *The Virtual Corporation*, Harper Business, New York, NY.
- Drath, W.H. (1990), "Managerial strengths and weaknesses as functions of the development of personal meaning", *The Journal of Applied Behavioural Science*, Vol. 26 No. 4, pp. 483-99.
- Drucker, P.F. (1967), *The Effective Executive*, Harper Colophon edition, New York, NY.
- Drucker, P.F. (1992), *Managing for the Future: The 1990s and beyond*, Truman Talley Books/Plume, New York, NY.
- Garfield, C. (1986), *Peak Performers: The New Heroes of American Business*, Morrow, New York, NY.
- Gelderloos, P., Walton, K.G., Goddard, P.H., Gaudet, D. and Pugh, N.D.C. (1988), "Whole blood serotonin and 5-hydroxy-indoleacetic acid: biochemical markers of leadership ability", *Proceedings of the Iowa Academy of Science*, Vol. 95, p. A57.
- Gustavsson, B. and Harung, H.S. (1994), "Organizational learning based on transforming collective consciousness", *The Learning Organization: An International Journal*, Vol. 1 No. 1.
- Hagelin, J. and Herriott, S. (1991), "Unified field based economics", *Modern Science and Vedic Science*, Vol. 4, pp. 72-95.
- Harung, H.S. (1994), "Management by automation (MBA): proposed peak collective performance through self-management in highly developed organizations", *The First International Workshop on Service Productivity*, EIASM – European Institute for Advanced Studies in Management, Brussels, 3-4 October.
- Harung, H.S. (in press), "Vedic psychology and the Edda poems", *Journal of Human Values*.
- Harung, H.S. (in review), "A unified theory of organizational performance", *Leadership & Organization Development Journal*.
- Harung, H.S. and Heaton, D.P. (1993), "Significance of higher stages of adult development for improving the effectiveness of knowledge workers", *Eighth World Productivity Congress*, 23-27 May, Stockholm.
- Hoare, D.O'S. (1993), "Don't shoot the pianist", *Management Decision*, Vol. 31 No. 7.
- House, R.J. and Mitchell, T.R. (1974), "Path-goal theory of leadership", *Contemporary Business*, Vol. 3 No. 2, pp. 81-108.
- Kaplan, R.E. (1990), "Introduction", *Journal of Applied Behavioural Science*, Vol. 26 No. 4, pp. 417-8.
- Kegan, R. (1994), *In over our Heads: The Mental Demands of Modern Life*, Harvard University Press, Cambridge, MA.
- King, B.J. and Chapin, K. (1974), *Billie Jean*, Harper & Row, New York, NY.
- Kotter, J.P. (1985), *Power and Influence: Beyond Formal Authority*, Free Press, New York, NY.
- Kouzes, J.M. and Posner, B.Z. (1987), *The Leadership Challenge: How to Get Extraordinary Things Done in Organizations*, Jossey-Bass, San Francisco, CA.
- Kuhnhert, K.W. and Russell, C.J. (1990), "Using constructive developmental theory and biodata to bridge the gap between personnel selection and leadership", *Journal of Management*, Vol. 16 No. 3, pp. 595-607.
- Leavitt, H.J. (1986), *Corporate Pathfinders: Building Vision and Values into Organizations*, Penguin, New York, NY.
- Loevinger, J. (1976), *Ego Development: Conceptions and Theories*, Jossey-Bass, San Francisco, CA.
- Loevinger, J. (1979), "Construct validity of the sentence completion test of ego development", *Applied Psychological Measurement*, Vol. 3, pp. 281-311.
- McClelland, D. (1985), *Human Motivation*, Scott-Foresman, Glenwood, IL.

- Maharishi Mahesh Yogi (1966), *The Science of Being and Art of Living*, International SRM, London.
- Maharishi Mahesh Yogi (1969), *On the Bhagavad-Gita: A New Translation and Commentary*, Penguin, Baltimore, chs 1-6 (first published in 1967).
- Maharishi Mahesh Yogi (1972), "The science of creative intelligence", videotaped course, Maharishi International University, Fairfield, Iowa, USA.
- Maharishi Mahesh Yogi (1976), *Creating an Ideal Society: A Global Undertaking*, MERU Press, Rheinweiler, Germany.
- Maharishi Mahesh Yogi (1986), *Life Supported by Natural Law*, Maharishi International University Press, Fairfield, Iowa, USA.
- Manz, C.C. and Sims, H.P. (1993), *Business without Bosses: How Self-managing Teams Are Building High-performing Companies*, John Wiley & Sons, New York, NY.
- Maslow, A.H. (1964), *Religion, Values, and Peak-Experiences*, Ohio State University Press, Columbus, OH.
- Maslow, A.H. (1968), *Toward a Psychology of Being*, 2nd ed., Van Nostrand Reinhold, New York, NY.
- Maslow, A.H. (1971), *The Farther Reaches of Human Nature*, Viking, New York, NY.
- Mason, L., Alexander, C.N., Travis, F.T. and Gackenbach, J. (1990), "EEG correlates of witnessing during sleep: a pilot study", *Lucidity Letter*, Vol. 9 No. 2, pp. 85-8.
- National Research Council (1994), *Organizational Linkages: Understanding the Productivity Paradox*, National Academy Press, Washington, DC.
- Orme-Johnson, D.W., Alexander, C.N., Davies, J.L., Chandler, H.M. and Lanmore, W.E. (1988), "International peace project in the Middle East", *Journal of Conflict Resolution*, Vol. 4, pp. 776-812.
- Sapolsky, R.M. (1990), "Adrenocortical function, social rank, and personality among wild baboons", *Biological Psychiatry*, Vol. 28, pp. 862-78.
- Schmidt-Wilk, J., Alexander, C.N. and Swanson, G.C. (in press), "Developing corporate consciousness: a literature review of the transcendental meditation programme in business", *The Journal of Business and Psychology*.
- Stodgill, R.M. (1974), *Handbook of Leadership: A Survey of the Literature*, Free Press, New York, NY.
- Tennyson, H. (1899), *Alfred Lord Tennyson: A Memoir by His Son*, new ed., Macmillan, London.
- The Performance Group (1993a), *A Study of World-class Performers: The Gateway to High Performance*, The Performance Group, Oslo.
- The Performance Group (1993b), *The Keys to Breakthrough Performance*, The Performance Group, Oslo (quotations).
- Thomas, L.E. and Cooper, P. (1977), "The mystic experience: can it be measured by structured question?", paper presented at the American Sociological Association, Chicago, IL.
- Torbert, W.R. (1991), *The Power of Balance: Transforming Self, Society and Scientific Inquiry*, Sage, Newbury Park, CA.
- Walton, K.G. and Levitsky, D. (1994), "A neuroendocrine mechanism for the reduction of drug use and addictions by transcendental meditation", *Alcoholism Treatment Quarterly*, Vol. 11.
- Wulff, D.M. (1991), *Psychology of Religion: Classic and Contemporary Views*, John Wiley, New York, NY.
- Yukl, G. (1981), *Leadership in Organizations*, 1st ed., Prentice-Hall, Englewood Cliffs, NJ.

---

Harald S. Harung is a Business Consultant and Researcher based in Oslo, Norway. Dennis P. Heaton is Associate Professor and Chair of Management at Maharishi International University, Fairfield, Iowa, USA. Charles N. Alexander is Professor of Psychology at Maharishi International University, Fairfield, Iowa, USA.