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Abstract

Management and performance are interdisciplinary, spanning diverse fields such as business, industry, government, sports, arts, health and education. In four studies, world-class performers in a variety of fields, for example, management, sports and classical music, have been found to display higher mind–brain development than matched average-performing control groups, including more frequent peak experiences. In this article, we will use a selection of clearly articulated peak experiences reported by these world-class performers to illustrate the subjective or inner nature of optimal performance. Such performance seems to be characterized by inner calmness and happiness amidst dynamic activity, maximum wakefulness, effortlessness and ease of functioning, and a sense of perfection. In order to provide an adequate theoretical framework for understanding peak experiences, we combine Western developmental psychology with the advanced growth range of higher consciousness (enlightenment), as outlined in the ancient Vedic knowledge of India.

Keywords

Optimal performance, mind–brain development, peak experiences, Transcendental Consciousness, higher consciousness, enlightenment

Introduction

The 2011 annual conference of the Academy of Management was entitled ‘West Meets East: Enlightening, Balancing, Transcending’. The conference invitation starts by the following:

In the wake of the [world economic] crisis, companies from emerging economies are among the leaders in growth and innovation, and the world appears to be in a transition from ‘West leads East’ to ‘West meets East.’ Now, more than ever, we need business professionals—academics and managers alike—who can make sense of today’s global complexity and multiplicity by thinking in broad and integrative ways. China’s re-emergence and the ascendance of India and other burgeoning economies offer an opportunity for revolutionary thinking based on the promise of ‘East-West’ integrative thinking and practice.

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The area of higher human development—where the East probably can make the most significant global contribution—is evident from the conference subtitle. With respect to India, this knowledge has already, for many years, been taught in the West to provide theoretical understanding of the full range of human development (Alexander et al., 1990; Maharishi, 1969, 1997) and practical procedures to facilitate such growth, for example, Yoga Asanas (postures), Ayurveda (health), Ghandarva Veda (music) and meditation techniques, for example, Transcendental Meditation (TM), where the positive effects on performance and well-being have been documented by extensive research (www.tm.org). The ancient texts like Upanishads, Rig Veda, Ramayana and Bhagavad Gita contain many records of transcending and the resulting balance, enlightenment and excellence in action.

In this article, we will support the idea that this timeless knowledge from India can play an important practical role in improving performance and well-being in contemporary society. On the basis of our research on world-class athletes, top-level managers and professional classical musicians, we provide illustrations showing that *peak experiences* (glimpses of transcendence and enlightenment) form the basis of peak performance. There are theoretical models in the West partly explaining such moments (for example, Maslow, 1968, 1971), but for a comprehensive understanding of transcending and higher consciousness (enlightenment, see below), we need to turn to the ancient Vedic texts.

Peak experiences typically occur spontaneously (Jackson & Csikszentmihályi, 1999; Maslow, 1968). Since they seem to be so important for performance, a vital question is as follows: How can they be systematically brought about? The Vedic texts also provide practical procedures for systematically cultivating transcendence and the growth of higher consciousness. In the ‘West Meets East’ conference, these techniques were introduced in the All-Academy Theme symposium entitled ‘Transcending and Peak Executive Performance’ (Biberman, Ayer, Harung, Heaton, Kendz & Travis, 2011). This symposium builds on my Unified Theory of Performance, which states that higher mind–brain development forms the basis for higher performance in any vocation (Harung, Heaton, Graff & Alexander, 1996; Harung, 1999; Harung et al., 2011; Harung & Travis, in press; Travis, Harung & Lagrosen, 2011).

This article integrates Eastern and Western insights. It provides qualitative, phenomenological illustrations of the inner or subjective nature of world-class performance. Such performance is often associated with intense inner happiness (bliss), inner silence and peace amidst dynamic activity, heightened wakefulness, effortlessness and ease of functioning, intrinsic gratification, playfulness, witness or observer to own activity, and frequent luck or good fortune (Coe & Miller, 1981; Harung et al., 1996; Harung et al., 2011; King & Chapin, 1974; Maslow, 1968, 1971, 1998; Privette & Bundrick, 1991). Peak experiences have probably been most studied in athletes (for example, Jackson & Csikszentmihályi, 1999), but such moments seem to belong to any field of activity, including business management and government administration. Anwar El Sadat, the former president of Egypt, who won the Nobel Peace Prize for his pioneering work to create peace in the Middle East, described the peace and joy which are indicative of a peak experience: ‘I was able to transcend the confines of time and space...Everything came to be a source of joy and delight...the achievement of perfect inner peace...[which could] provide a man with absolute happiness.’ From then on, he writes: ‘My paramount object was to make people happy’ (Pearson, forthcoming, pp. 190–191).

World-class performers in a wide range of professions and activities report such rewarding peak experiences: world-class athletes such as Patsy Neal, Robert de Castella, Sebastian Coe and Roger Bannister; poets like Emily Brontë, Alfred Lord Tennyson, Ralph Waldo Emerson, Walt Whitman and William Wordsworth; scientists such as Einstein, Kepler, Maxwell and Schrödinger; composers like Beethoven, Brahms and Mozart; national leaders such as Vaclav Havel—all have reported a comprehensive range of such glimpses (Harung, 1999; Pearson, forthcoming).

The purpose of this article is to further explore the characteristics of peak experiences and how they may form the basis of effective performance. This could enable performers to better understand and appreciate the inner dimension of top performance. Without this knowledge, such experiences may, in the worst case, be disregarded as something that is not useful, or even as a problem. Another benefit could be that we, to a larger extent than before, seek circumstances that trigger peak experiences, for example, mental techniques (Harung, 1999) and harmonizing music (Maslow, 1968). Since most people enjoy brief peak moments only once or a few times during life, this suggests that there is an extensive potential for improvement in performance in the general population.

The article starts by reviewing four quantitative research studies on world-class performers. Using this material, a selection of clearly articulated peak experiences is cited. The quotations are illustrative, not exhaustive. For a few quotations, we refer to other sources, for example, the world-class runner Sebastian Coe (Coe & Miller, 1981). All the other quotations are from our *own* research—a written permission has been obtained to disclose the names of those that are quoted by name.

The experiences are presented in the framework of a theoretical model of the full range of human development. This comprehensive model consists of two domains: (a) Psychological development up to post-conventional growth, as outlined in the modern social sciences (Alexander et al., 1990; Loevinger, 1976; Loevinger et al., 1985; Maslow, 1968, 1971); and (b) higher consciousness from the ancient Vedic (Veda means knowledge) tradition of India (Alexander et al., 1990; Harung et al., 1996, 2011; Maharishi, 1963, 1969, 1997). The term mind–brain development spans both domains. The article also contains a review of research on peak experiences.

Review of Quantitative Research on World-class Performers

Several authors write that higher psychological development is predictive of enhanced leadership and performance (for example, Covey, 1989; Harung, 1999; Joiner & Josephs, 2007; Maslow, 1968, 1971, 1998; Rooke & Torbert, 2005). For example, Joiner and Josephs (2007) observes that ‘As adults grow toward realizing their potential, they develop a constellation of mental and emotional capacities that happen to be the very capacities needed for agile leadership’ (p. vi).

Four research studies on accomplished performers—top-level managers, world-class performers in a variety of fields (management, government, sports, education), world-class athletes and professional classical musicians—provide statistical support that top performance is associated with higher mind–brain development (for example, Harung et al., 1996; Harung et al., 2011). Mind–brain development is a comprehensive measure that includes unfolding mental levels deeper than what is commonly realized today—especially Transcendental Consciousness, the most basic and ex-panded level of awareness—and the associated refinement and integration of brain functioning (Harung et al., 2011; Travis, Arenander & DuBois, 2004).

Measures

A number of psycho-physiological measures were used to test the difference between the top performers and their matched control groups (see later for details about matching). These measures were all aspects of mind–brain development.

Tests: The following psycho-physiological tests—that have been shown to correlate with higher performance (Harung et al., 1996, 2011, in press; Travis et al., 2011)—were administered to one or several of the four groups: (a) paper-and-pencil measures of moral reasoning (Gibbs, Basinger & Fuller, 1992) and ego or self-development (the ways people understand themselves, interact with others and make meaning of their world; Loevinger, 1976; Cook-Greuter, 1999, 2000); (b) the Brain Integration Scale assesses how coherent, restfully alert and economical the electrical wave activity of the brain is, as measured by EEG—electroencephalography (Travis, Tecce, Arenander & Wallace, 2002); (c) using skin potential response, habituation reflects how quickly a person can ignore an irrelevant noise (distraction) and focus on what is important (Harung et al., 2011); (d) colour-word test, which is a measure of the speed of resolution of perceptual conflict (Stroop, 1935); (e) vigilance levels and cortical speed of processing (Polich, 2007).

Survey of Peak Experiences: The four questions of the Survey of Peak Experiences (Harung et al., 1996) were administered in all four studies. The first three questions are directly related to Transcendental Consciousness (Cook-Greuter, 2000; Maharishi, 1963). Maslow (1971, p. 269) also connects peak experiences to transcendence, which he sees as the ‘most inclusive or holistic level of human consciousness’. The fourth question deals with luck, which may be an aspect of higher development (Maslow, 1968):

1. Experiences of Transcendental Consciousness during rest/relaxation with eyes closed:

During practice of relaxation, meditation, prayer, or any other technique—or when you have relaxed or had a quiet moment—have you then experienced a completely peaceful state; a state when the mind is very awake, but quiet; a state when consciousness seems to be expanded beyond the limitations of thought, beyond the limitations of time and space?

2. Transcendental Consciousness during waking 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.’
3. Transcendental Consciousness during sleep: ‘During deep sleep, have you ever experienced a quiet, peaceful, inner wakefulness? You woke up fresh and rested, but with a sense that you had maintained a continuity of silent self-awareness during sleep?’
4. Luck or fortunate coincidences appear to gradually increase in frequency and intensity throughout the full range of human development and become especially pronounced in higher states of consciousness: ‘Have you experienced that your desires are fulfilled in a way that seems to be caused by coincidence or luck? You may have experienced that the circumstances arrange themselves to fulfil your desires without your direct action.’

For each question, the respondent was asked to describe a related peak experience to allow us to check that it was genuine.

Interview: The world-class athletes and their controls were interviewed using one question following the Behavioural Event Interview Structure (Michael, McDaniel, Whetzel, Schmidt & Maurer, 1994):

Please describe what happens when you perform at your very best. Please describe the specific situation, your inner experiences in body and mind, and how you relate externally to others and the environment during optimal performance. You may also want to talk about what happens before and after such instances.

Probe questions were used to bring out further details of the experience.

Four World-class Studies

The results from our four studies will now be summarized.

Phase 1—World-class Performers on the International Level: This preliminary study examined frequency of peak experiences in 22 internationally known people, selected for their ability to function at the top in business, government, sports and education, as well as in creative fields such as performing arts (Harung et al., 1996; Harung, 1999). Frequency of peak experiences was significantly higher in the top-level subjects compared to non-matched students for eyes closed/rest (question 1) and during sleep (question 3).

Phase 2—World-class Norwegian Athletes: The National Olympic Training Centre in Norway (Olympiatoppen) and the Norwegian School for Sport Sciences (Norges Idrettshøgskole) selected world-class athletes who had placed among the top 10 in major competitions (Olympic Games, World Championships, World Cup or similar) for at least three seasons (Harung et al., 2011). The top performers and average-performing controls were matched for age, gender and type of sport. The top performers had significantly higher brain integration, faster habituation to a loud sound, higher ego or self-development and higher moral reasoning. There were no significant differences on the frequency of peak experiences. A content analysis of the interview shows that the top athletes used more frequently words reflecting higher psychological development, such as growth orientation¹ and wholeness (Boes, Harung, Travis & Pensgaard, in review).

Phase 3—Top-level Norwegian Managers: This study investigated physiological and psychological characteristics of 20 top-level Norwegian managers—who had held their top positions for an average of about 18 years—and compared them to matched low-level managers and skilled knowledge workers (Harung & Travis, in press). The two groups were matched for age, gender and type of organization (public or private), and levels of education were similar. The top-level managers had a trend for greater luck, and significantly more frequent peak experiences during eyes closed/rest, higher brain integration scores and higher moral reasoning. Peak experiences during activity and sleep were not significantly different.

Phase 4—Professional Classical Musicians in Norway and Sweden: Twenty-five professional classical musicians from the Oslo Symphony Orchestra, The Norwegian Opera and the Gothenburg Symphony Orchestra (Travis, Harung & Lagrosen, 2011) were compared to age- and gender-matched controls (amateur classical musicians). Both groups had played their instrument since childhood. It was found that the professional musicians had significantly higher moral reasoning; more frequent peak experiences during rest, activity and sleep; higher speed of resolution of perceptual conflict and higher cortical speed of processing. There was a trend for vigilance levels, while luck and brain integration were not significantly different. Both groups had high brain integration, which suggests that playing classical music since childhood may refine overall brain functioning.

First Developmental Domain: Post-conventional Growth

Sense of self underlies how we make meaning of daily experiences, and is reflected in our success in planning, thinking and acting. Mind–brain development consists of progressively becoming consciously aware of deeper levels of the mind as shown in Table 1 (Alexander et al., 1990). Levels of inner growth are characterized by an increasingly expanded awareness, and range from ego-centric (pre-conventional), to socio-centric (conventional), to world-centric (post-conventional), to ego-transcendence (enlightenment; Cook-Greuter, 1999, 2000).

Table 1. Levels of the Mind

Major Levels of Mind	Function
1. Behaviour	Action Senses
2. Thinking	Concrete thinking mind Deciding intellect Feeling and intuition
3. Experiencing	Ego (integrates all levels into meaningful experiences)
4. Transcendental Consciousness	Peak performance in higher states of consciousness

Source: Alexander et al. (1990).

The significance of this growth for performance can be illustrated by contrasting the personal characteristics of conventional ego or self-development (about 80 per cent of today’s adult population; Cook-Greuter, 1999, 2000) with post-conventional development (about 10 per cent of adult population)²: from path following to path finding; from dependence to greater autonomy; from narrow craft perspective to more holistic comprehension; from unilateral control to collaboration; from reactive to proactive and preventive; from short-term to long-term perspective; from ambivalence to feedback to embracing feedback; from deficiency-orientation to growth-orientation; from win–lose to win-win interpersonal strategies; from externalizing blame to taking responsibility for own life; and from extrinsic motivation (beating others, money, fame and power) to intrinsic motivation (competing against oneself, and a search for peak experiences, meaning and happiness). The above comparison list is a summary of previous research by Maslow (1968, 1971, 1998), Loevinger (1976), Wuthnow (1978), Cook-Greuter (1999, 2000) and Rooke and Torbert (2005). These shifts explain why higher levels of psychological development are associated with enhanced performance, as we have found.

Illustrations of Post-conventional Values and Attitudes

Intrinsic Motivation: The world-class cross-country skier Thomas Alsgaard, who won 11 gold medals in Olympic Games or World Championships, appears to be intrinsically motivated:

The main goal is to compete with myself—it is every day to make progress. The whole time. If I make progress every day, I know that the results during competition will be good. But the results are secondary in a way. The media need to focus on the gold metal, but in reality it is not this that matters to me. What matters to me is internal, it is very little commercial... To put it acutely—I have won many races but been

dissatisfied. On the other hand, I have been number 4 or 5 in a race while being very satisfied. It is my evaluation of the work I have done which is important.

Several other world-class athletes also express that the process is primary, that is, the fulfilment of performing well is in itself more gratifying than winning. The offshore boat racer, Bjørn Rune Gjelsten, has excelled both in management and sport—for example, in sport he won a record five Class 1 Powerboat World Cups. He illustrates inner motivation by stating that ‘the special feeling is most important, not the trophy’.

Growth orientation: A knack for growth is illustrated by Bjørn Rune who withdrew from all the turmoil of celebrations and media 30 minutes after winning major races. He wanted to analyze and learn from the day’s race while it was still fresh in his mind. The world-class handball goalkeeper, Heidi Tjugum, was part of the Norwegian national team that won one World Championship, one European Championship, two European Cups and a number of silver and bronze medals in such championships. She likes growth and finding new solutions:

It is fun to challenge myself. This is what keeps me motivated. I am the type that easily gets bored when things are too simple. Routine is OK, but I like some surprises. I like it when I have to think, have to find new solutions. I like it when I feel that OK this is a new problem and now I have found a new solution. Then I am very happy, even though the solution perhaps not was the optimal one.

Focus on Excellence: Peak performers seem to use deeper, more powerful levels of the mind to, for instance, improve their performance by visualizing upcoming events. For a powerful mind, it is especially important to focus on positive things, that is, to put the attention on what one wants to achieve, and not on what one do not want to happen. The world-class orienteer,³ Hanne Staff, who won four World Championships and one World Cup, recollects an important race when she ran straight into 14 controls (check points), but missed on the fifteenth. Afterwards she analyzed only those controls where her navigation had been successful. In contrast, her major competitors in hindsight put a lot of attention on controls they had missed. Hanne thinks this difference at least partly explains why she won several major races where her competitors appeared to be equally fit and able. Likewise, Heidi tells the story of once she had a rare bad day in goal; afterwards she watched videos of only her very best matches!

Proaction Instead of Reaction: Thomas explains the benefit of proaction:

Like in a race, in a finish duel, you just have to do something. I have to make a choice before my competitors realize that a choice must be made, I have to be in advance. I cannot wait to see what they do, and then I have to analyze it. This will simply take far too much time...Many things happen that I cannot explain why or what has happened—it is just that I have done it. Nine out of ten times it was the correct choice.

Second Developmental Domain: Higher States of Consciousness

I have no doubt whatever that most people live, whether physically, intellectually or morally, in a very restricted circle of their potential being. They make use of a very small portion of their possible consciousness...Much like a man who, out of his whole organism, should get into the habit of using and moving only his little finger.

(William James, father of American psychiatry, 1963, pp. 275–276)

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The above quote illustrates that there may be an extensive unused potential in the general population. How can this potential be explored? In addition to Abraham Maslow and William James (1982), a few Western developmental psychologists, such as Eric Fromm (1960), William Torbert (1991), Charles Alexander (1990) and Susanne Cook-Greuter (1999, 2000), have written about growth beyond self-actualization to higher states of consciousness. However, mainstream Western psychology offers no integrated theoretical framework to explain, for example, peak experiences. Research in the West on peak experiences will first be reviewed, followed by a comprehensive model of the full range of human development into four higher states of consciousness, as described in the ancient Vedic tradition of India.

Review of Research on Peak Experiences

Maslow (1968, 1971, 1998) studied visibly successful people and on this basis concluded that they had frequent peak experiences—short intense glimpses described by great joy, beauty, wholeness, aliveness, perfection, completion, justice, order, effortlessness, playfulness and self-sufficiency (1971, p. 129). He continues, ‘The peak experiences of pure delight are for my subjects among the ultimate goals of living and the ultimate validations and justifications for it’ (1968, p. 80), and ‘*the peak-experience is only good and desirable, and is never experienced as evil or undesirable*. The experience is intrinsically valid, perfect, complete and needs nothing else’ (p. 81, his italics). In Maslow’s opinion, peak moments ‘can have very, very important consequences’ (1971, p. 170), and practically everyone does have such glimpses, but not everyone knows it. With respect to leadership, Maslow (1971, pp. 280–281) observed: ‘It is my tentative impression that I am more likely to find cognizing of transcendence...in powerful and responsible leaders and managers’.

Wuthnow (1978) describes an interview study of a random sample of 1,000 persons in the San Francisco area, and concluded that virtually everyone appears to have peak experiences of one kind or another. He also found that those reporting several deep and lasting peak experiences (peakers) tended to find their lives more meaningful, to feel more assured of themselves, to be less concerned with social status (that is, more intrinsically motivated) and more concerned with helping others, as compared to those not reporting any deep and lasting peak experience (non-peakers).

Landsman (1969) studied ‘the beautiful person’ and found her or him to be self-accepting, self-liking, self-enjoying, self-expressive and self-understanding; and having a relationship with other human beings that is compassionate, helping and involving love, deep care and commitment. Other terms he used were well-balanced, productive, efficient, self-fulfilled and self-realized.

Panzarella (1980) asked 103 respondents, who generally were well-educated in their aesthetic media, to report an ‘intense joyous experience’ of listening to music or looking at visual art. A content analysis showed positive correlation between peak experiences and (a) self-actualization and (b) differentiated self-perception, but no correlation with respondents’ age, sex, education and visual art or music ability. Peak experiences were described in the following terms: Immediately I lost my tired feeling; I had the feeling of being more myself; feeling of high and floating sensations; I felt exhilaration, released, joyous; being at one with the music and not only with the music but with the people, concert hall, etc.; a sort of crazy joy; extreme satisfaction; feeling of elevation; in complete freedom; loss of time, loss of spatial orientation; everything seemed right and wonderful. Feelings *after* peaks included the following: Refreshed and relaxed, I felt as if my problems had diminished considerably; magic remained in memory

as I went about the house getting dinner; feeling of contentment, peace; long-lasting, usually permanent effects were attributed to their peak experiences by 90 per cent of the respondents.

Mihály Csíkszentmihályi's (1990) work suggests the positive impact of a special state which he terms 'flow'. When in flow, people experience being fully immersed with energized focus, full involvement, spontaneous joy and success in the activity. However, compared to peak experiences, flow seems to be a broader concept—where skills match challenge—covering both ordinary waking consciousness (see later) and peak experiences: 'Thus, while an event that involves flow may also be defined as a peak experience or a peak performance, there are many other opportunities for flow that are not reserved for moments of highest happiness or best performance' (Jackson & Csíkszentmihályi, 1999, p. 13). Hence, confusion may sometimes arise (Privette & Bunderick, 1991). To the extent that flow deals with peak experiences, the phenomenology is in line with and highlights the observations made in the four world-class performance studies.

Thornton, Privette and Bunderick (1999) found significant differences in peak experiences between business leaders and non-leading controls.

Plateau Experiences

Maslow (1971) writes that the effect of the transient peak experiences—that often contains an element of surprise or even disbelief—inevitably remains with the person, and may over time result in more lasting plateau experiences. While the plateau experiences are characterized by much the same qualities as the peaks, the plateaus have a more serene and calm nature since the person is now more familiar with transcendence. Although Maslow had deep insights into the further reaches of human nature, he admits that 'it is unfortunate that I can no longer be theoretically neat at this level' (1971, p. 270). Likewise, Jackson and Csíkszentmihályi (1999, back cover) write, 'The experience of flow is still one of the least understood phenomena in sport'.

Vedic Tradition of India and Higher Consciousness

Although there are many descriptions of and substantial research into peak experiences in the West, no comprehensive model of higher consciousness seems to exist, as already noted. To provide an integrated framework, Alexander et al. (1990) therefore extended Western thinking into the realm of higher consciousness outlined in the ancient Vedic tradition of India, which was written in Sanskrit. Vedic knowledge was recently revived by Maharishi Mahesh Yogi (1963, 1969, 1979), a world-leading expert on human growth. Beyond self-actualization, the Veda outlines four ego-transcendent, higher states of consciousness. This advanced range corresponds to becoming consciously aware of Transcendental Consciousness—TC (see Table 1), the source of thought.

Table 2 gives an overview of the proposed seven states of consciousness (Maharishi, 1997; see also, Alexander et al., 1990; Cook-Greuter, 2000). The first three are the common states of sleep, dreaming and waking consciousness experienced by everyone. In the Vedic model, the stages of psychological development up to and including unfoldment of the ego are seen as *sub-states* within the normal waking consciousness. The fourth state Transcendental Consciousness is where level 4 in Table 1 is experiencing

Table 2. Seven States of Consciousness

State of Consciousness	Vedic Term (in Sanskrit)	Transcendental Consciousness	Awareness of Object
1. Sleep	Sushupti Chetanā	No	No
2. Dreaming	Swapn Chetanā	No	Illusory
3. Waking	Jāgrat Chetanā	No	Yes, but only more surface aspects
4. Transcendental	Tyṛīa Chetanā	Yes	No
5. Cosmic	Tyṛiyātīt Chetanā	Yes	Yes, but only more surface aspects
6. Refined Cosmic	Bhagavad Chetanā	Yes	Yes, surface and subtlest aspects of object
7. Unity	Brāhmī Chetanā	Yes	Yes, self-awareness and object in terms of the same transcendental aspect

Source: Maharishi (1997); see also, Alexander et al. (1990); Cook-Greuter (2000).

by itself—self-awareness without any thoughts. This state in Sanskrit is known as Samadhi or Turīya Chetanā. Cosmic (unbounded) consciousness, refined cosmic consciousness, and unity consciousness consist of progressive growth where Transcendental Consciousness coexists with activity. These states are collectively known as *Moksha*—enlightenment or liberation.

Illustrations of Glimpses of Four Higher States of Consciousness

The phenomenological nature of all four higher states of consciousness will now be illustrated. Most of the quotations to be presented came out of the interview with the athletes. In addition, a few experiences emerged from the Survey of Peak Experiences from all four studies. As a consequence, sports dominate. However, it is probably that these experiences apply to optimal performance in any vocation. Although it has been the goal to select only what appears to be genuine glimpses of higher consciousness, one can never be certain that they all in effect are peak experiences.

Using questions 1–3 (excluding luck) on the Survey of Peak Experiences, we found that 73 per cent of the world-class athletes and 71 per cent of their controls reported having at least one such experience in their life (Harung et al., 2011). For the managers, the response rate was 91 per cent and 82 per cent (Harung & Travis, in press), and for the classical musicians 100 per cent and 80 per cent (Travis et al., 2011). The average frequency for these three studies was 84 per cent. Probably the actual experience rate is higher than this, for example, some of our subjects have said that when reflecting *after* taking part in the research, they realized that they had more such experiences than they reported. Also, there are many peak moments that have other characteristics than those contained in the Survey of Peak Experiences, as we shall see later.

The Fourth State—Transcendental Consciousness: Transcendental Consciousness is consciousness experiencing itself, without an object or thought. Heidi Tjugum indicated such an experience when she says:

I have quite a lot of times experienced a state where I am completely inside myself and everything else disappears. This is a form of relaxation. Then it is also warm again. And there is nothing that can

touch me. It feels very good. It is not that those periods are so very long. But it is beautiful to have them, once a week or once a day. Just sit down and feel that now it is only me that matters.

In response to question 1 (rest/relaxation), several of the top-level managers also describe what seems to be the experience of contact with Transcendental Consciousness: (a) 'I often feel an extreme feeling of happiness. Energy flows in a current throughout the whole body—like several comfortable waves—like a mild wind.' (b) 'The experience that everything is right...an intense happiness and inner joy.' (c) 'I have experienced complete happiness—just a great feeling of happiness.'

In the Vedic tradition, Patanjali Yoga Sutra states that 'Yoga [Transcendental Consciousness] is complete settling of the activity of the mind...What remains is unbounded wakefulness.' According to Kena Upanishad,

[Transcendental Consciousness] comes to the thought of those who know him beyond thought, not to those who imagine he can be attained by thought...By the Self [Transcendental Consciousness] we obtain power...For a man who has known him, the light of truth shines; for one who has not known, there is darkness.

In the ancient Nordic Edda poems, that are closely related to Veda, Transcendental Consciousness is described in terms of '[consciousness] given to consciousness' and 'myself to myself' (Harung, 1996, p. 28). Neuroscience research is finding that self-reported experiences of transcendence correlate with integrated brain functioning, including high EEG (electroencephalography) coherence in frontal regions (Travis et al., 2002).

The Fifth State—Cosmic Consciousness: The witnessing quality of cosmic consciousness comes about by Transcendental Consciousness observing the activity of the more outer mental levels (see Table 1). This detached observing can take place during waking (both restful and active), dreaming and sleeping. Witnessing during activity is indicated by Thomas Alsgaard: 'In a way you become a spectator. When...this dreaming starts, you see things from above'. And by Heidi Tjugum:

Sometimes I have felt that I am an observer—I just watch what happens. This is a good feeling. It is a very beautiful feeling; it is not that I feel I don't have control. But it goes by itself—in reality I do not have to initiate anything at all. Extremely here and now—nothing else matters. And it is unbelievably good. Beautiful experience. These feelings are unbelievable nice. They stimulate me to taking on further challenges. Obviously, this is what I am longing for every time I go to a training session, to have this sensation that OK this I master so well that it is just for the opposing players to come at me. Just shoot! Whatever you do, you will not be able to score!

Witnessing sleep is the principle indicator of the development of cosmic consciousness. The EEG evidence supporting the reality of witnessing deep, dreamless sleep is that people having these experiences exhibit the EEG signature of Transcendental Consciousness, which is theta/alpha (7–9 Hz cycles) EEG power and coherence, along with the signature of deep sleep, which is delta EEG (1–4 Hz; Mason et al., 1997).

Cosmic consciousness is described by the ancient Yoga Vasishta text of India as follows:

He is awake but enjoys the calmness of sleep; he is unaffected in the least by pleasure and pain. He is awake in deep sleep...His wisdom is unclouded by latent tendencies. He appears to be subject to likes,

dislikes and fear; but in fact he is as free as the space. He is free from egotism and volition; and his intelligence is unattached whether in action or in inaction. None is afraid of him; he is afraid of none.

The Sixth State—Refined Cosmic Consciousness: Heidi reports on subtle perception indicative of refined cosmic consciousness:

I feel a security, warmth. The colours become pretty, the flag is beautiful. Yes, just joy, plainly speaking. There is a glorification. I experience the beauty in everything. I get bubbling energy in the body. If I have that feeling, I have tears in my eyes every time I hear the national anthem. The emotions are stirred. Yes, yes, I see deeper into things, seeing more fundamental aspects.

The Seventh State—Unity Consciousness: A feeling of unity is expressed by what Bjørn Rune Gjølsten says about his best performances:

Different state of mind. The great picture. A different modus. Beyond time. The intellect is disconnected—lies in the background. Spontaneity. Automation. Very strange. I become a part of the boat. Feel a union with the boat. Extreme. Become wholeness: We [Gjølsten and his trottlemann], boat, and water.

A 52-year-old female, viola soloist in the Oslo Philharmonic Orchestra recalls, ‘...as if my inner expands to include the activity of the whole orchestra and even the audience’. Wuthnow (1978) found that 39 per cent of his subjects answered yes when asked about ‘feeling that you were in harmony with the universe’.

Modern quantum field theories in physics have glimpsed a unified field as the common basis of the physical universe (Antomatis, Ellis, Hagelin & Nanopoulos, 1988). Hagelin (1987) and Harung (2010) argue that the unified field is identical to Transcendental Consciousness—in other words, that mind and matter are fundamentally united. This underlying unity has been expressed by the Vedic literature for thousands of years: ‘The microcosm and the macrocosm are one’—Yogakundali Upanishad; ‘That which is far away is within’—Isha Upanishad; and ‘That which is smaller than the smallest is bigger than the biggest’—Katha Upanishad. Similarly, Maslow (1998, p. 42) writes, ‘We must ultimately assume at the highest theoretical levels of enlightened management theory, a preference or tendency to identify with more and more of the world, moving towards the ultimate of...a fusion with the world, or peak experience.’

Clarification of Terms: Maslow’s peak and plateau experiences can now be placed in the Vedic framework. Peaks are momentary glimpses of all four higher states of consciousness and plateaus are longer periods of only the three higher states of consciousness; Transcendental Consciousness is not involved in plateau experiences since transcendence on its own by nature is temporary.

Peak Performance and Higher Consciousness

The ancient Vedic text Bhagavad Gita recommends that ‘Established in Yoga [Transcendental Consciousness], O winner of wealth, perform actions’ (Maharishi, 1969, p. 135) because ‘Yoga is skill in action’ (p. 141). Action in the three higher states of consciousness appears to display a number of gratifying features such as meeting with no resistance, everything is right, exhilaration, greatly expanded wakefulness,

perfection and even a sense of invincibility (for example, Harung et al., 1996; Maharishi, 1963, 1969; Pearson, forthcoming; Wuthnow, 1978). The following citations from our study of world-class athletes exemplify a selection of salient qualities.

Special State: Trude Dybendahl Hartz, a cross-country skier who won one gold, three silver and two bronze medals in World Championships, and three silver medals in Olympic Games, describes her best performances in terms of the following:

Enormous presence in yourself. The surroundings are unessential. A large bubble around me—what is outside the bubble is very diffuse. More than a mental state—emotional and spiritual. Feel an enormous joy. Prepared. Alert. Balance between being settled and dynamic. Everything is right—as it should be. No analyzing—it only is. No resistance. Witness to self. Strange experience. Extremely light version of myself. Almost as if I do not touch the ground.

‘It is difficult to describe, but it feels like experiencing a kind of eternity, contrary to everyday life, which is in continuous movement,’ says a 42-year-old male, piano soloist in Oslo Philharmonic Orchestra.

The orienteer Bjørnar Valstad, who won four World Championships and one World Cup, also describes the special state in terms of everything being right:

It’s a very strong feeling when you’re in the race and you know that this is how it should be. And you know that I’m not going to lose it. It’s going to stay this way the whole race...when you’re running some other competitions, sometimes when you don’t get this feeling so strong, then suddenly you do something foolish, stupid, and you lose time. But during those really, really good competitions you can’t get out of it. (Laughter). On those days you have 100 per cent control over your mind, but it’s very relaxing—no stress at all.

Witness or Observer to Own Activity: Bjørnar recollects when he won the 2004 World Championship classic distance he became a witness to his own activity:

I feel quite safe in some way...And all the things I’m doing are in some way just sitting in the background. Mentally, in orienteering we have map-reading, but it’s going automatic...When I’m in this mode, there are no negative thoughts. It’s like sitting in a car with an auto-pilot and just sitting watching. I notice something happen in front of me and I need to do something and then back again, and you just sit there. When [in] the race, this is quite simple. It’s getting to know how to practice this, which is most difficult.

One of our top-level managers noted: ‘When sitting in meetings or during various other activities, I often get a feeling of being an observer to what is happening.’

Greatly Expanded Awareness: Bjørn Rune Gjelsten recollects how his mind expanded during one of his best races:

Vibration in the boat. Vibrations several places. I perceived a signal that things were not OK. Afterwards, black box showed vibrations in the 12th or 13th round. Extremely small. Smell of burnt. Vibration. The senses are extremely stimulated. Expanded wakefulness. Good feeling. Exhilaration. Builds up as I am approaching the competition. Lasts longer than the finish. Phases of stepping down. All the way until bedtime, also next morning.

Thomas Alsgaard recalls:

The senses are so open that you have the ability to receive signals that are almost scary: In a way it is a 'high.' I receive an unbelievable amount of information. Much, much more—10–20 times more information—than what I manage if I sit down and concentrate and try to perceive things. But I am so relaxed. And the more relaxed I am, the more information I register.

Integrated Wholeness: The handball player, Susann Goksør Bjerkrheim, who was part of the Norwegian national team winning one gold, one silver and one bronze in World Championships; two silver and one bronze in Olympic Games; and one silver and one bronze in European Championships, describes how the team on several occasions enjoyed what seems to be a 'collective peak experience', for example, when winning the World Championships:

Sometimes, all the way from the warm-up the communication with the other team members is good; you know in advance that today you are going to succeed in an unbelievable way. On such days there is a shared, positive mood in the team. It is abstract and gives energy. I feel the response from others. Everybody is fully present in the situation. There is a mass suggestive effect where we all melt into a greater fellowship. I get chills down my spine. I feel invincible when this community mood is there—a strong togetherness or coherence. During such exhilarated times, when things fall into place...the action of each player is extremely well coordinated with those of all the other players. There is rhythm and harmony in the team. We read each other correctly, things float, and there is a high spirit and energy. Everybody contributes their energy into the team. Definitely extreme energy is created. It is difficult to recreate this mood—either it is there or it is not there. Absolutely it is a collective high—much stronger than an individual high. Everybody has to be fully present...It is also expanded to include the spectators.

Powerful Mind: Thomas Alsgaard explains how he, during optimal performance, transcends the intellect and utilizes deeper, more powerful levels of the mind:

Deeper aspects have much greater potential. Much, much greater potential. The intellect, [past] experience, and knowledge lie at the back of the head, in the unconscious...My experience after many years at the top is that there is tremendously much in the mental, tremendously much. My point of view is that this is what differentiates the best from the second best.

Bjørnar Valstad has also experienced the power of the mind:

In the beginning [of your career] you don't think so much about the mental aspects. There are a lot of people training the same way...physically. They have the same strength, everything is the same. But why is someone beating others? I don't think it is how they are doing their interval [training] sessions. I think it's very much about thinking the right way.

Self-sufficiency: A powerful mind naturally translates into the high degree of self-sufficiency that we find in people with a mature psychology. Says Thomas Alsgaard:

Taking responsibility for one's own development. There is nobody else that can create a winner. No coach or manager that can create a winner. This is one of the things I learned from my father when I was 14, and that is self-sufficiency. Make your own plans and decisions, and evaluate yourself. In the final analysis there is no one else that can help me.

Effortless and Economical Action: Peak performance is frequently described using words like ‘least action’, ‘effortless’, ‘no resistance’ and deep relaxation amidst dynamic activity. Trude Dybendahl Hartz describes her 10 best races using words like the following: ‘No resistance. Living in an internal world. Absorbed. I am ready. Enormous presence. I act based on impulse. Alert.’ Heidi Tjugum talks about automatic action: ‘Get that good feeling...then it goes by itself. It is as if the body functions without me having to do something about it’.

The British track runner Sebastian Coe at one time held four world records: 800 m, 1,000 m, 1,500 m and 1 English mile. When breaking the one-mile world record in 1979, he recollects: ‘I was prepared for it to hurt, but it didn’t happen. I was feeling very comfortable, so I stuck in hard for thirty or forty yards, got a gap over Scott, and then began to float’ (Coe & Miller, 1981, p. 72). That it was an effortless experience was apparent even to the audience; as the US Track and Field News reported: ‘What stunned most observers was his almost complete lack of fatigue after the race. No stumbling, no heavy breathing’ (p. 74).

In contrast, the finish when Coe won the 1,500 meters at the 1980 Olympic Games in Moscow appears to be fundamentally different:

The mental agony of knowing that I had hit my limit. I tried to drive again at 40 metres out, and in the next few strides I knew I had nothing left if anyone came back at me. The anxiety over the last 20 metres was unbearable, and it showed on my face as I crossed the line. After a few yards I sank down on my knees. (p. 142)

This quote illustrates that high performance is possible also without having a peak experience. However, a peak experience may provide the basis for even higher performance, for a longer time, and within a wide range of activities; and with less wear and tear on body and mind (Harung et al., 1996).

Automation in Action and Spontaneous Right Action: Related to effortless, easy functioning is the sense of spontaneous right action. Jackson and Csíkszentmihályi (1999, p. 75) write, ‘It’s like everything goes automatically without [your] thinking...’ Goksør Bjerkrheim experienced automation in action when her handball team won a major international competition:

When I have this extreme alertness, the body reacts automatically. I am freed from thinking how to move the body—everything goes by itself. Instantaneous coordination of mind and body; body spontaneously reacts to what you observe. It goes by intuition. There are two steps: (1) Read the situation and make right choices. There is a high adaptability and critical choices are made correctly. (2) Body moves effortlessly—there is perfection in mind-body coordination. It is great relief when everything goes by itself. No effort. Easy. Unbelievable self-satisfaction. Nothing is difficult. A kick. A high.

As seen, spontaneous right action during a peak moment was also reported by Bjørnar Valstad, ‘mentally, in orienteering we have map-reading, but it’s going automatic’. He has explained that this experience was as if running a route marked with ribbons, while orienteering in reality involves thousands of decisions to successfully navigate through a demanding race often lasting 1–2 hours.

Intense Happiness: Bjørn Rune Gjelsten talks about top performance using phrases indicating that it was an intrinsically satisfying experience: ‘Even if bad placing, I was satisfied with the result. Positive experience. Lighter state of mind. No friction. Happiness. Intense euphoria. Exhilaration.’ The female

soccer player Hege Riise—who was part of the Norwegian national team winning one World Championship, one Olympic Games and one European Championships—recalls experiencing ‘bubbles’ of happiness during peak experiences; while Heidi Tjugum says, ‘Yes, just joy, plainly speaking’, and Trude Dybendahl Hartz reports, ‘feel an enormous joy’.

The Vedic texts write ‘Sat Chit Ananda’ where Chit = consciousness, Sat = eternal and Ananda = bliss (Maharishi, 1969, pp. 187, 441). Thus, bliss or intense happiness is one aspect of Transcendental Consciousness, and when acting in Transcendental Consciousness, this bliss is maintained.

Playful and Non-striving: Related to the feeling of joy, bliss, exhilaration or euphoria, peak moments often involve a feeling of play (Maslow, 1968). Says Thomas Alsgaard:

It is a game. Sport is play. The day it becomes serious, then you are done. This is what differentiates the very best from the next best. [It is] important to keep it a game. It has to be fun. This is what it started with, and this is what it finished with. That it was great fun. The joy and that it was a lot of play.

Frequent Luck and Good Fortune: Luck is perhaps not an arbitrary feature, but an attribute naturally belonging to mature development (Harung & Travis, in press; Maslow, 1968). As Thomas Alsgaard points out, it is usually the same persons who have luck all the time. He himself has won 6–7 gold medals in Olympic Games or World Championships with less than a one second margin. Hanne Staff believes that good luck enabled her to beat equally qualified competitors. One top-level manager says: ‘It happens all the time that I am surprised of how things fall into place.’ A second CEO writes:

It seems to me that I often have luck in business, when buying a property or something. It often turns out that those businesses that did not come through would not have been so smart, even though I would have done it if not something outside my control had come in the way.

Reliable Intuition: Hanne Staff said that in many orienteering races, she made decisions that appeared there and then to be irrational, but after the race she realized that these choices enabled her to win. Hege Riise explains how during peak experiences: ‘I always am where the ball falls down. The right place at the right time. A pass comes that I “know” will fall down on my foot—and I shoot a volley and score. A slow motion feeling where I know I will succeed.’

Improved Time Management: Deeper levels of the mind appear to be associated with much quicker processing, thereby saving time (Harung, 1999). In a way, time expands. This is related by Bjørn Rune Gjelsten during his best races: ‘The perception of time changes. Slowly: Captures almost everything. Pick up much more nuances than normally.’ Susann Goksør Bjerkrheim describes when her team won a major international competition:

When three seconds were left, we needed one more goal to win. There was a free throw and I got the ball. In less than one second, I first had to evaluate the position and movement of all the other five players in my team. I decided that none of them were in a good position to score. Then I decided to shoot myself even though I was not in a very good position. Next, I made the necessary moves, and was able to score. I experienced an extreme wakefulness. I absorbed and processed an unbelievable amount of information in an unbelievable short time.

Sense of Invincibility: Above Susann Goksør Bjerkheim talked about the power of a coherent team: ‘I feel invincible when this community mood is there.’ Thomas Alsgaard recalls that ‘when everything is at the very highest level, then I feel invincible. The up-hills are not long enough nor steep enough; extremely good sensation.’

Discussion

Since contemporary social sciences do not provide an integrated theory of ego-transcendent experiences, we have outlined a model from the ancient Vedic tradition of India. This model describes four higher states of consciousness—in addition to the common states of waking, dreaming and sleep (Alexander et al., 1990; Maharishi, 1963, 1969, 1997)—that seem to provide a framework for understanding the peak experiences reported in this article and by others (Coe & Miller, 1981; King & Chapin, 1974; Panzarella, 1980; Wuthnow, 1978). Yet, the conclusions that can be drawn from the phenomenological experiences presented in this article are obviously limited. Although there is some research on the psychophysiology of higher consciousness (for example, Harung et al., 1996, 2011; Mason et al., 1997; Travis et al., 2002, 2004), more research is needed to test the model of seven states of consciousness.

What is the impact of peak experiences? The definition of peak experiences most acceptable to Maslow (1968, p. 69) was ‘moments of highest happiness and fulfilment’. As seen, his opinion was that practically everyone does have such glimpses that ‘can have very, very important consequences’. Panzarella (1980) writes that aesthetic peak experiences may leave ‘permanent “total” effects involving more positive self feelings as well as improved relationships with others and a boost of optimism’. We found that peaks are reported by several top performers to be highly gratifying, that they often were associated with best performance and that on average, 84 per cent of the world-class performers and controls remembered at least one peak experience in their life.

Repeated research has found that mind–brain development is rare after the age of 17–20 (for example, Chandler, Alexander & Heaton, 2005; Loevinger, 1976; Piaget, 1972); that such growth is generally not affected by higher education (Cook-Greuter, 2000; Loevinger et al., 1985); and that adults end up at a wide range of growth stages (Loevinger et al., 1985; Rooke & Torbert, 2005). Therefore, the frequent occurrence of peak experiences suggests that these precious moments do *not*, in general, cause a developmental shift. It may be that many repeated peaks are necessary for significant mind–brain development. The essential question is therefore: How can we systematically bring about transcendence and mind–brain development?

Although there are certain triggers that increase the likelihood of transcendence—such as music, art, sport, sex, nature and relationships—peaks are nevertheless spontaneous and cannot be brought about at will (Jackson & Csikszentmihályi, 1999; Maslow, 1971; Panzarella, 1980; Wuthnow, 1968). Thomas Alsgaard also finds that his peak experiences come by themselves: ‘I have been working on this my whole life, and it is not possible to govern this.’ Maslow (1968, p. 163) writes about self-actualized people that ‘in these healthy people we find duty and pleasure to be the same thing...we know they are that way, but not how they get that way’. Perhaps we need to turn to mental techniques to systematically foster mind–brain development and higher performance (Harung, 1999). Wuthnow (1978) found that 88 per cent of peakers reported some form of meditation, against 55 per cent for non-peakers.

Conclusion

This article has illustrated how a wide range of world-class performers relate peak experiences to optimal performance. These top performers and others reported in the literature describe peak moments in terms of high intrinsic motivation, greatly expanded awareness, deep inner relaxation amidst dynamic activity, effortless functioning and inner joy. Previous quantitative research has found a significant difference between top performers and average-performing controls in terms of mind–brain development. The phenomenological experiences and qualitative research taken together indicates that higher development provides a common foundation for effective performance, thus suggesting a Unified Theory of Performance.

The two most salient points of this article are as follows: (a) Most people report at least one brief peak experience in their life. However, frequent and lasting experiences of higher consciousness are rare. Thus, the potential for higher development and substantially higher performance may be generally available in society. (b) To realize this growth potential, modern Western thinking has to be complemented by the ancient knowledge and practical procedures of the East.

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Notes

1. Growth orientation or growth motivation means behaviour driven by motivation to ‘actualize one’s potentials, capacities, and talents, towards a fully functioning person’ (Maslow, 1968, p. 25).
2. About 10 per cent of adults are at pre-conventional development, a growth range normally found in children.
3. Orienteering is a sport where one runs and navigates in a forest using a map and compass. The point is to visit a number of check points in the fastest possible time.

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