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406

Reflections

Improved time management through human development: achieving most with least expenditure of time

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The need to improve time management

> Effective executives, in my observation, do not start with their tasks. They start with their time ... Effective executives know that time is the limiting factor (Drucker, 1967, pp. 25-6).

Time is a measure of change, of duration of a sequence of events. In today's society, change, diversity, and complexity are increasing at an accelerating speed. Hence, the ability to handle change – and time – is more and more becoming a critical factor.

According to Drucker (1967), executives do not manage their time well. We assume that this issue applies to all professions (e.g. Dahl, 1990). Currently there is a major shift of the workforce from manual work to knowledge and service work. According to Drucker, we have since Scientific Management been concerned with the most effective use of time where it matters least – manual work. Here the difference between time-use and time-waste is primarily efficiency and cost. "But we have not applied it to the work that matters increasingly, and that particularly has to cope with time: the work of the knowledge worker and especially of the executive. Here the difference between time-use and time-waste is effectiveness and results" (Drucker, 1967, p. 35). Hence, with an increasing number of knowledge workers, it becomes more and more vital to make time effective.

The purpose of improved time management is first to obtain maximum value-adding outer results in a minimum interval of time – to do less and accomplish more. Secondly, to have more time available in our life, or at least more prime (productive) time. This may be achieved by reducing aging and prolonging life-span by decreasing wear and tear on our mind and body. Thirdly, to think and act in a timely manner, i.e. select the most appropriate time for any action. The theme of this paper is that all the three factors just listed can be simultaneously improved through higher stages of human development.

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Before getting on to how we can improve time management, we will examine what time is by considering objective and subjective time.

Objective and subjective time

Time has two main categories: objective and subjective. Objective time is what we measure by the clock. Its origin is the movement of the earth around the sun. Objective time is typically viewed as a *fixed* quantity, i.e. that its speed is invariant and that it is the same for all people. However, as we shall see, even the duration of objective time can be a variable.

Subjective time is the way we experience, utilize, and metabolize the sequence of changes in our life. There are many aspects of subjective time. Do we consider time a positive factor? Is the passage of life meaningful? Are we able to accomplish the goals we have set for ourselves? What is the effect of time on us in terms of development and aging? Is time running us or are we mastering it? The subjective experience of time varies greatly from individual to individual, and from event to event for the same individual.

Two arrows of time

Hawking (1989) presents two *arrows of time* that distinguishes the past from the present. First, according to the *second law of thermodynamics,* everything around us is changing towards more disorder. This is why cars rust, wood rots, and we have to regularly clean our house. Because of this law, there is a thermodynamic arrow, the direction of time in which disorder increases. Second, there is a psychological arrow, the direction of time in which we remember the past but not the future. Hawking (1989, p. 160) concludes that "I have shown that the psychological arrow is essentially the same as the thermodynamic arrow, so that the two would always point in the same direction", i.e. in the direction of decreasing order.

Fortunately for us, the powerful second law of thermodynamics applies only to *closed* systems. According to non-equilibrium thermodynamics, it is possible for an *open* system to change in the direction of increasing order. Man is such an open system. We achieve this apparent disequilibrium with nature through our food which has been made using energy from the sun. In a sense we "eat order". However, the net result is still increased disorder in the universe. The reality is that we are establishing "a small corner of order in an increasingly disordered universe" (Hawking, 1989, p. 161). As we shall see later, our evolution up to the age of 17-20 years is a vivid example of our ability to become more orderly in a universe moving in the opposite direction.

Time as relativistic

According to classical or Newtonian physics, time is fixed. Contrary to expectation, with the advent of contemporary physics, it was discovered that even objective time is a variable (Penrose, 1991). *Einstein's special theory of relativity* predicts that the duration of time as we normally knows it holds only true for the clock of a stationary (non-moving) observer. When the observer is

moving, his clock will actually slow down – the greater the speed, the more time slows down.

We are not talking about an illusion or an inaccurate clock, but simply that the time told by the clock will slow down for a moving observer. If the speed of the observer is small compared to the speed of light, these two times will be almost the same, "which explains why we are not directly aware of the fact that 'moving clocks run slow'" (Penrose, 1991, p. 197). At the extreme speed of light, the clock stops altogether. The *twin-paradox* can be used to illustrate the relativity of the time actually measured:

> One twin brother remains on the earth, while the other makes a journey to a nearby star, travelling there and back at great speed, approaching that of light. Upon his return, it is found that the twins have aged differently, the traveller finding himself still youthful, while his stay-at-home brother is an old man (Penrose, 1991, p. 197).

Subjective time is also relativistic. Consider that even though we live in the same world, and everybody has the same number of hours a day and days in a year, we see that different people utilize and experience time in greatly different ways depending on psychological mode (Langer *et al.*, 1990). Some accomplish great things during their life, while others having the same life-span only perform on a mediocre level.

The relative nature of subjective time can be illustrated. The strange thing is that the more we worry about time, the less we have of it! Talking about the procedure of making meetings effective, Drucker (1967, p. 31) states: "People must feel that 'we have all the time in the world'. This actually means that one gets a great deal done fast. But it means also that one has to make available a good deal of time in one chunk and without too much interruption."

An experiment at Harvard University can be used to shed further light on the subjective nature of the way we experience time. Langer *et al.* (1990) carried out a study where subjects were induced to adopt their own mindsets of 20 years ago. Psychological and physical measures were taken before and after the intervention. It was found that the change in mental context produced observable improvements, at least for a short time, in physical health and cognitive capability.

This paper deals with *subjective* time. It is argued that the primary factor determining the degree of positivity associated with our experience of time, is the degree of development of the observer. In other words, to improve time management we need to expand our conscious awareness. On this basis, the paper is structured in four themes. Theme 1 holds that time is a positive factor when we are satisfied. Theme 2 predicts that the experience of time is transformed in a positive direction when we are developing our consciousness towards a more mature psychology. The final two themes deal with two consecutive ranges of human development. First, the normal range outlined in contemporary social science is examined in theme 3. It is proposed that advanced development in this range automatically leads to increased mastery of time by increasing effectiveness and prolonging life-span. Finally, theme 4

proposes that with the full development of human potential – described in the Vedic Psychology of Maharishi Mahesh Yogi – we can escape the time trap. By this is meant that time can cease to be a limiting resource in our life.

Theme 1: Time is a positive factor when we are happy

In any experience there are three elements: the observer, the process of observation, and the observed (Maharishi, 1986, p. 41). We can say that the observer and observed are joined together by the process of observation. The subjective experience of time is a measure of the quality of this interaction, i.e. the degree of satisfaction that the observer is experiencing. At one extreme, when the observer and the observed are completely *alien* to each other, we experience time as a drag. We struggle or we are bored; time moves very slowly, and we desire that the sequence of events should come to an end as soon as possible. In this scenario, time is a negative factor.

On the other extreme end of the spectrum, when we feel a deep intimacy or satisfaction with the object, and we are fully absorbed or engaged in activity, our experience is that time ceases to be an issue. On the contrary, in such moments of profound inspiration or peak performance, or during the experience of deep awe or beauty, time becomes a completely positive factor. We are literally having a *good* time. We want more and more of it! Therefore, we find that the subjective experience of time in reality is dependent on the degree of satisfaction we experience in any one situation.

The importance of satisfaction in providing a meaningful experience of time is supported by research and experience. Dahl (1993) has applied the principle of a changing object to increase productivity and quality. His insight is that the implementation of lasting improvement is only possible when the change is self-motivating. And this again is only possible when the change leads to, most importantly, improved satisfaction. Other researchers have found that job satisfaction and general happiness are two factors closely correlated with a long and healthy life (Palmore, 1974). In a sense, job satisfaction buys us more time.

Above we have linked our subjective experience of time to the nature of the object as we perceive it. We can call this an *object-dependent* experience of the quality of time. However, the interaction between observer and observed indicates that it is not only the nature of the object that determines our experience of time: the observer or subject plays a much more profound role (Harung, 1997). If we are happy, which means we like ourselves and have an intimate relationship with ourselves, then that stable internal happiness provides an *object-independent* basis for experiencing time as a positive factor. This situation-independent experience of satisfaction is related to the principle "beauty lies in the eye of the beholder". As we shall see in the coming three themes, with human development there is an increasing growth of a permanent inner state of happiness, and thus, in our ability to manage time.

Theme 2: Human development leads to more positive experience of time

This theme states that when we evolve, we experience time as a positive factor. On the contrary, when we stop evolving, or even start retarding, time will unavoidably become a negative factor in our life.

The reason for this scenario may be found in the principle that the nature of life is to grow (Maharishi, 1966). When we grow, we are in tune with our own nature, and, as a consequence, we are satisfied. Thus, we suggest that continued growth is a prerequisite for experiencing lasting satisfaction (Harung, 1997). With satisfaction, it follows from theme 1 that time becomes a friend.

The principle that human development leads to positive experience of time can be illustrated by common experience. Up to the age of 17-20 years, time is normally experienced as a positive factor. We want more of it! A seven year old girl is looking forward to becoming 12 years with great anticipation. Since her personality is developing, the prospects of more maturity brings with it an increasing spectrum of desirable possibilities. After adolescence or early adulthood, the situation usually appears to change dramatically – in fact, it is reversed. Once we have passed 30, we don't normally look forward to becoming 40 or 50! The situation where people as a rule do not look forward to old age seems to apply to the current West. However, there may be places in the world where old age has a positive connotation, e.g. societies where the elderly play an important role in guiding the younger.

The turning point between 17-20 years is not a coincidence. We typically enjoy psychological development up to adolescence (although this development tends to stall (Alexander *et al.*, 1990, 1994)). Thereafter, psychological growth as a rule stalls and remains unaffected by later education and work experience (Alexander *et al.*, 1990, 1994). Similarly, common experience indicates that physiological development reaches an optimum level just before 20 years of age and after some years starts to decline. It is for this reason the highest levels of performance within sports are associated with the age range between 20 and 35 years.

The proposition that human development leads to a positive experience of time can be illustrated by considering research on the Maharishi Transcendental Meditation (TM) program (Maharishi, 1966). Three classes of this research are examined: development after adolescence, reduced aging, and a study on the actual experience of time.

Development after adolescence

The TM technique is a simple and effortless procedure for providing the mind and body with deep rest, and the mind with enhanced wakefulness. It is practiced 15-20 minutes morning and afternoon sitting comfortably in a chair. A number of studies on the Transcendental Meditation program have found development not normally found in adults. This growth indicates improvement in the ability to accomplish more with less expenditure of time and energy. A controlled study by Alexander *et al.* (1993) in a US Fortune 100 company found

that 45 TM practitioners improved significantly more than 41 controls on such parameters as:

(1) reduced physiological arousal during and outside TM practice;

(2) decreased trait anxiety, job tension, insomnia, and fatigue; and

(3) enhanced employee effectiveness, job satisfaction, and work/personal relationships.

Similar results were found in a large study involving in total almost 800 employees in a major manufacturing corporation in Japan (Haratani and Itsumi, 1990a, 1990b). Other studies have found that the TM technique leads to development of creativity (Travis, 1979), improved memory (Dillbeck, 1982), and broader comprehension (Pelletier, 1974).

Reduced aging

The deterioration of physiological functioning after becoming an adult is known as aging. Sharma (1993) points out that there is, in general, a precise relationship between time and aging; it seems as if there are biological clocks that predict the speed of aging with a high degree of accuracy. However, Langer *et al.* (1990, p. 126) states that "psychological factors make an important contribution (positive or negative) to the way humans age [and] the aging process is less fixed than has hereto been suspected". Perhaps aging as we normally know it is the product of a negative experience of time. We metabolize all experiences (Harung, 1996a). Therefore, when we feel lack of satisfaction, we age. In contrast, when we experience happiness and fulfillment, aging may slow down, or maybe even stop.

This claim that aging is related to development and satisfaction is supported by research on the transcendental meditation technique. First, a large volume of research taken together shows a development in many mind-body areas that is directly opposite to that of aging. In addition to the factors listed in the previous subsection, studies have found decreased blood pressure, enhanced auditory threshold, and improved reaction time (for a summary of this research, see Maharishi International University, 1988, p. 38).

Secondly, a number of factors most closely related to longevity are strengthened through the TM technique, e.g. improved cardiovascular health, enhanced work satisfaction, improved physical functioning, and enhanced happiness rating (Maharishi International University, 1988, p. 39). Thirdly, Wallace *et al.* (1982) found that those practicing the Transcendental Meditation technique and the advanced TM-Sidhi program experienced reduced physiological aging. Those that had practiced these techniques for more than five years had a biological age that on average was 12 years below their chronological age (Figure 1). Short-term meditators were five years younger, and non-meditating controls were 2.2 years younger. The study statistically controlled for diet and exercise.

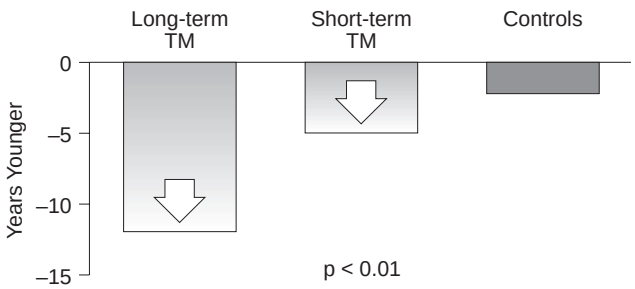


Figure 1.
Reversal of the aging process through Transcendental Meditation

Source: Wallace *et al.* (1982)

To summarize, before the age of 17-20 years we have change and evolution. After this threshold we have change and stagnation, leading to deterioration or aging. One component – change – is common to both ranges. If we can only maintain change in the direction of growth throughout life, our lifeline may be extended significantly. In this vein, Sharma (1993) argues that it should be possible to live for 120-130 years. But, as he humorously points out, not in order to play golf and bingo for another 50 years! Instead, higher age should lead to more wisdom. Through lifelong development, mature age can take on a fundamentally new role:

(1) for themselves, the elderly can continue to enjoy a purposeful and meaningful life; and

(2) for society, they can become a highly valuable resource.

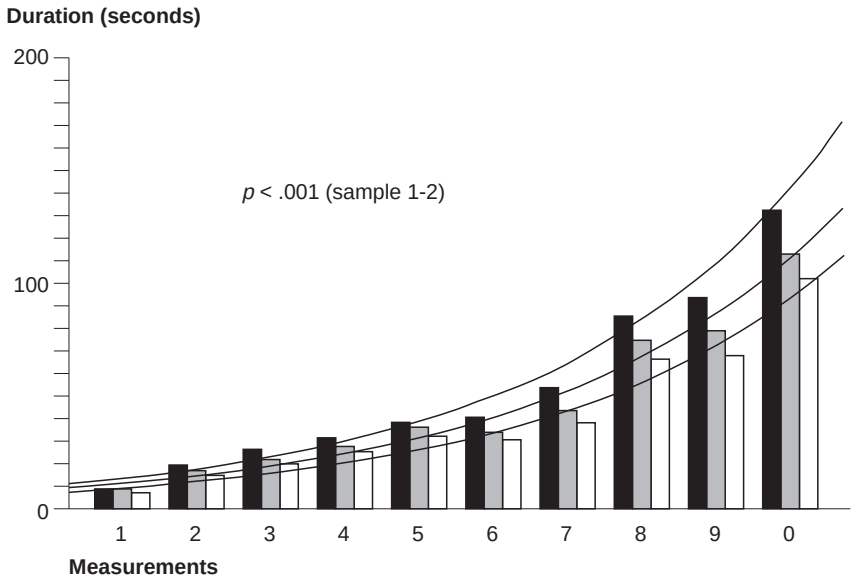
A study of the direct experience of time

Research shows that development through the TM technique directly influences the way we experience time. Danielsen (1996) has developed a *Test of Estimated Time* – TET. This test consists of a number of short time intervals that was randomly generated by a computer. A stop watch and a tool which gives a sharp, short sound is used to designate the beginning and end of each time interval during testing. After each interval the person is asked to write down his assessment of duration. Danielsen administered TET to around 1,000 persons. Figure 2 shows a comparison between:

(1) Objective time as measured by the clock (real time RT).

(2) Estimated time (ET) for sample 1, consisting of 242 (non-meditating) students at the University of Bergen, Norway.

(3) ET for sample 2, consisting of 85 students at Maharishi University of Management (formerly Maharishi International University), Fairfield,



Key

- Real time (reference)
- Estimated time for sample 1: **University of Bergen, Norway**
- Estimated time for sample 2: **Maharishi University of Management, USA**

Source: Danielsen (1996)

Figure 2.
Test of estimated time

Iowa, USA, where Transcendental Meditation is part of the organizational culture.

It is evident that the three classes of time duration are markedly different, the difference between sample 1 and 2 being highly significant ($p < 0.001$). Danielsen achieved similar results for two smaller groups of meditating and non-meditating persons that were matched for age, gender, various personality variables, and socioeconomic status.

There are alternative ways to interpret these findings. We infer that the meditators are less pressured by time. Less time pressure leads to a feeling of more time available, which again, according to the quote above by Drucker, means getting more done in a given real time interval. Similarly, Danielsen concludes that those practicing the transcendental meditation technique feel less time urgency and have more positive emotions. These two factors could explain the difference between the two groups in terms of time perception, and the net result that the meditators seem to have more time available than the controls.

If the process of human development in itself gives rise to a more positive experience of time, it seems likely that mature development will have an effect that is even more favorable. This will be the topic of the next two themes.

Theme 3: Ordinary developmental range in modern psychology – increased mastery of time

The next two sections will examine the effect of mature development on subjective time. As a basis for our description of stages of development, we begin by reviewing a comprehensive model of the mind from the Vedic tradition, an ancient body of knowledge that today is being restored to its full significance and practicality by Maharishi Mahesh Yogi (1969, 1972; Alexander *et al.*, 1990, 1994) as his Vedic Psychology. This model depicts the mind[1] as consisting of several levels, each with its own functional specialty (Figure 3). Starting from the most expressed or surface levels of the mind, and moving toward the most subtle, these levels are: action, senses, desire, mind (in terms of the faculties of thinking and memory), intellect or the discriminating and deciding faculties, feelings, ego (or the individual experiencer), and transcendental consciousness or higher self (Maharishi, 1966; see also Alexander *et al.*, 1990).

This model of the mind gives rise to two consecutive ranges of development which are analyzed in themes 3 and 4 respectively. First, the ordinary range, which is described in modern psychology, spans from action and senses to the unfoldment of feelings and ego. Second, the advanced range, that is a natural extension of the ordinary range, is described in the Vedic Psychology of Maharishi Mahesh Yogi (1966, 1969, 1972; Alexander *et al.*, 1990, 1994). This upper domain is known as higher states of consciousness; it corresponds to the unfoldment of transcendental consciousness.

A principle that applies to the full developmental range is that the stage of growth exerts a strong influence on one's perception of reality (Alexander *et al.*, 1990, 1994; Loevinger, 1976; Torbert, 1991). As we develop, we do not forget the reality of earlier stages. On the contrary, assumptions and outlooks that previously dominated are incorporated in a greater wholeness where the natural focus always is on the most recently acquired perspective. According to Harung *et al.* (1993, 1995, 1996), mature development is the main predictor of level of performance.

In less mature stages of development within the ordinary range, one depends upon the social surrounding for a sense of identity, values, and direction. These substages are collectively referred to as *conventional*. Today some adults, a small minority, experience personal evolution to a *postconventional* threshold where they become relatively autonomous, self-actualized individuals (Maslow, 1968; Torbert, 1991). This threshold corresponds to the unfoldment of feelings and ego at the end point of the ordinary developmental range. The personalities of postconventional persons 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.

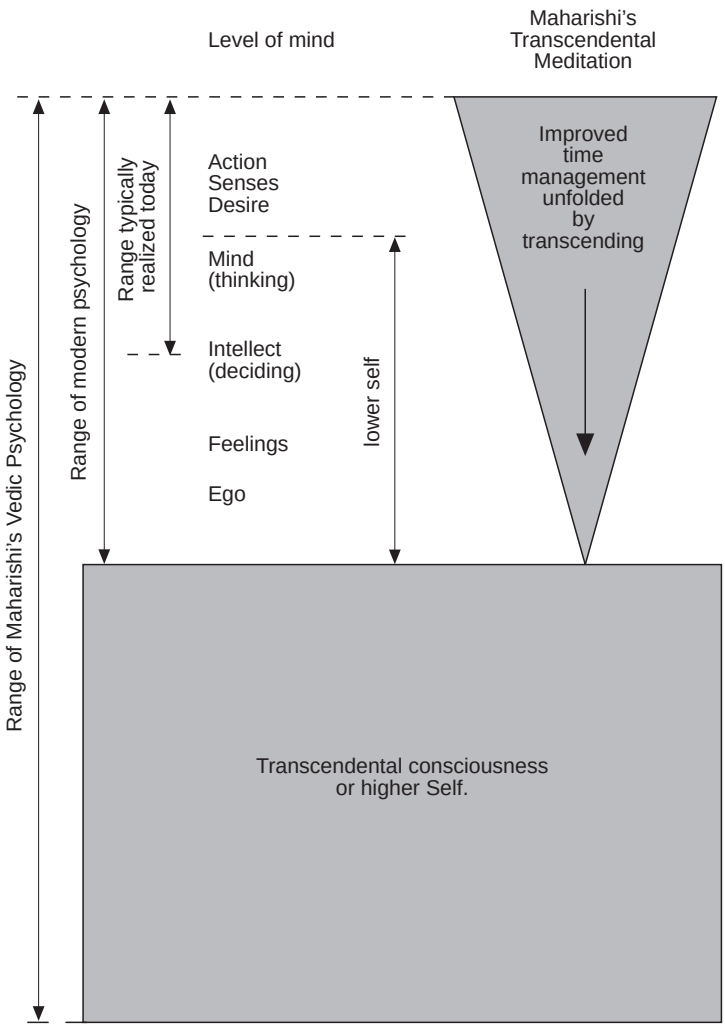


Figure 3.
Levels of the mind

The following will give several examples of how mature development in the postconventional range of contemporary social science provides a platform for improved utilization of time. The first sub-section deals with increased productivity both for the individual and organization. This is followed by topics on a shift of perspective from short-term to long-term, enhanced intuition, improved ability to delegate, and parallel mental processing. Finally, there is a mention of how the Transcendental Meditation technique makes possible the transformation from conventional to postconventional stages.

Increased productivity

According to the Montreal Declaration of the World Confederation of Productivity Science (1990), productivity has three components:

(1) effectiveness;

(2) efficiency; and

(3) occupancy.

Effectiveness means that activity is directed to meeting genuine individual and social needs. Efficiency means that activity is performed in such a manner that the resources expended are no more than necessary. Occupancy means that effective and efficient activity occurs continually and without interruption. Of these three factors, effectiveness is clearly primary; as Dahl (1990) points out "efficiency is irrelevant unless we are effective – there is no point in doing something well which should not be done at all".

On the level of the *individual*, there are considerable variations in the productivity of people. For instance, the effectiveness of priorities set by different people varies considerably. Moreover, once people have set their priorities, the reality is that their actual use of time often is drastically different from what they intended. Actual recordings of time, have amply illustrated this point (Dahl, 1990; Drucker, 1967). It is for this reason Drucker (1967) advises managers to "know thy time".

Similarly, mature *collective* development – as evident from a healthy corporate culture – is predicted to result in enhanced organizational utilization of time and improved performance in general (Gustavsson and Harung, 1994; Harung, 1995; Harung and Alexander, 1997).

That there are considerable differences amongst businesses in terms of time management, can be illustrated by considering *lean production* as introduced by Japanese car manufacturers (Womack *et al.*, 1991). Compared to the traditional mass production of cars originally developed in the USA, lean production is superior in most, if not all, ways. Womack and his colleagues found that, contrary to common belief, *faster is cheaper*. The employees at the lean production plants were able to design new cars in approximately half the time with almost half the number of engineering hours. One of the keys was "simultaneous development", a point we shall return to later. And when it comes to manufacture, the difference between lean and mass production is equally astonishing: half the human effort in the factory, half the manufacturing space, and half the number of defects per car. According to Harung and Harung (1995), the root cause of the more proficient time management in the lean companies is a higher level of collective development than in the mass production plants.

From short-term to long-term perspective

Torbert (1988) writes that the priority shifts from short-term to long-term time perspective with the transformation towards the end point of development in modern psychology. A long-term perspective implies that we are less bound and driven by time.

Enhanced intuition

There is evidence that the majority of adults in today's society are characterized by only a partial unfoldment of the intellect, and that still deeper mental levels – such as feelings and ego – remain beyond conscious reach of most of us (Alexander *et al.*, 1990, 1994; Harung *et al.*, 1995, 1996) (Figure 3). The intellect works by discriminating, by analyzing parts. Since the intellect tends to consider one part at the time, it is unavoidable that the notion of sequence becomes predominant. With sequence dominating, longer time is needed.

If we move deeper than the intellect, to a reality where feelings and intuition dominate, we tend to experience time differently. Feeling may be described as a more "relaxed" state of the intellect: "It is flexible and relational (hence more sensitive to context and change) and involves a subtler, more rapid, holistic, intuitive mode of functioning, less dominated by linguistic expression and sequential formal reasoning" (Alexander *et al.*, 1990, p. 305). Clearly, the active use of feeling and intuition will tend to reduce the time needed for making a decision – particularly with respect to gathering information, but also during the actual act of deciding. Enhanced intuition would also improve the effectiveness of decisions, which would save future time. Time-saving conclusions may in particular result from a synergy of objective and subjective approaches to decision making (Harung, 1993).

Improved ability to delegate

Effective delegation requires a mature psychology – one that is associated with increased empathy, tolerance, respect for individual differences, and ability to empower others (Torbert, 1991). Effective delegation fosters more teamwork, open communication, and self-management which should make it possible to accomplish more with less, and thereby save time.

Parallel processing

As we unfold deeper levels of the mind, we *spontaneously* improve the ability to simultaneously consider a situation from different levels of the mind, each level having a distinctive and complementary functional speciality (Harung, 1996a). The resulting parallel processing capacity of the mind may be related to what Torbert (1988) denotes *action enquiry*. Normally, performance improvements are achieved through an alternation of action and learning phases. In action enquiry, which Torbert connects with the postconventional range, these two phases occur simultaneously. Obviously, this gives an increased ability to utilize time efficiently.

Fostering development to the postconventional range

The above considerations are only purposeful provided that we in practice can foster human development to higher stages. However, such growth is normally difficult to realize in practice – Torbert (1991) calls such transformations "a significant social mystery". It is therefore gratifying that the Transcendental

Meditation technique provides a uniquely effective tool to foster psychological development to the postconventional range, and beyond.

A ten-year longitudinal comparative study of ego or self-development (Alexander *et al.*, 1994; Chandler, 1991) employed Loevinger's standard sentence completion test, a non-fakeable projective instrument with well-established validity and reliability (Loevinger, 1976, 1979). A sample of 34 meditating students at Maharishi University of Management (MUM) in Fairfield, Iowa, USA were pretested and posttested over a period of ten years, and compared to alumni of three other American colleges who took part in the same testing program over the same time period (total number of control subjects is 102).

The sample at MUM increased significantly in ego development by almost one full step on Loevinger's scale compared to the control groups ($p < 0.000001$). It is striking that 38 per cent of all meditating subjects achieved the full postconventional phase. The high percentage in the TM-group was up from 9 per cent at pretest. In comparison, 1 per cent of control samples were functioning from this level at both pretest and posttest, thus supporting our claim that human development typically stops after 17-20 years of age. The MUM alumni achieved the highest scores on ego development yet recorded among adolescent and adult samples – including Harvard alumni and senior management samples (Alexander *et al.*, 1994).

The postconventional stages are seen by Loevinger (1976) as closely related to what Maslow (1968) calls self-actualization. Further evidence that transcendence through Transcendental Meditation 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* (Shostrom, 1966). The effect size (ES) in standard deviation units of TM on overall self-actualization (ES = 0.78) was approximately three times as large as that of other forms of mental techniques (ES= 0.26) and relaxation techniques (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.

Theme 4: Advanced developmental range in Maharishi's Vedic psychology – can we escape the time trap?

So far this paper has discussed improved time management through increased effectiveness and more time available through a longer life. Despite these benefits, time may still remain as a major constraint in life. Theme 4 will attempt to move beyond this constraint and consider if we can escape the time trap altogether by developing higher states of consciousness. Escaping the time trap implies that time ceases to be a factor limiting what we accomplish in life, both professionally and in general.

This theme starts with a description of development beyond self-actualization. According to Vedic Psychology (Alexander *et al.*, 1990, 1994; Maharishi, 1972), higher states of consciousness are unfolded in two broad sequential steps: first, the unfoldment of transcendental consciousness in itself, i.e. deep inner silence without any outer activity, second, further refinement of the human nervous system until this inner silence coexists with dynamic outer activity. Thereafter, theme 4 goes on to consider action in higher states of consciousness and next attends to the question "can we escape the time trap?" Finally, the prospect of developing higher states of consciousness in practice is briefly mentioned.

Transcendental consciousness

Transcendental consciousness is experienced on its own as a state of restful alertness, silent wakefulness, without any activity. 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 (Figure 3):

> 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 related to what Maslow (1964) calls peak experience. Maslow stated that "my feeling is that … the power of [one peak] experience could permanently affect the attitude toward life" (p. 75). This point can be illustrated by considering the writings of former president of Egypt, Anwar El Sadat, who won the Nobel Peace Prize for his pioneering work to create peace in the Middle East. As a young man this leader had several peak experiences while in political prison, a time which he recognized as the turning point in his life. Sadat describes his experiences in words like "I was able to transcend the confines of time and place… Everything came to be a source of joy and delight… the achievement of perfect inner peace, and so provide a man with absolute happiness". From then on, he writes, "my paramount object was to make people happy" (Pearson, in press, pp. 190-1).

Higher states of consciousness

Transcendental consciousness on its own is devoid of thought and action. With further development, gradually there is a spontaneous growth in the ability to integrate transcendental consciousness with activity in higher states of consciousness (Alexander *et al.*, 1990; Maharishi, 1972). Harung *et al.* (1995, 1996) depict performance in higher states of consciousness as occurring from a fundamentally different platform of development than the self-initiating action of a postconventional, self-actualized individual. Performance in higher states of consciousness is not merely the expression or actualization of unique individual talents, but rests upon the unfoldment of the universal self-

transcendental consciousness. Hagelin and Herriott (1991) suggest that 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), individuals 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). Maslow (1971, p. 285) discusses a related notion of development beyond self-actualization to "transhumanism (centering in the cosmos rather than in human species)".

Action in higher states of consciousness

The effect that action in higher states of consciousness may have on time management, can be explained by three quotes. Aldous Huxley (1947, p. 212) wrote that "the universe is an everlasting succession of events; but its ground…is the timeless now". During his youth, the Norwegian bishop Kristian Scheldrup proposed that "time cannot escape the forced sequence of events, but we can escape time…" (quoted in Brochman, 1972, p. 84). Similarly, from the standpoint of modern physics, Hagelin (1987) writes with respect to the most fundamental level of nature that "there is little reason to believe that the familiar concepts of space, time, and causation have meaning at the [level of the unified field]".

These quotes suggest a duality where sequential events and time exist on the level of the physical universe, while on the subjective level time is completely transcended at the most fundamental level of transcendental consciousness. Thus, performance in higher states of consciousness appears to be characterized by an inner experience of a non-changing "timeless now" coexisting with outer activity in an ever-changing world.

The growth of higher states of consciousness is said to provide a foundation for success in any area of life by developing full alertness and full creative intelligence (Maharishi, 1972, 1995a). This claim was supported by a study of some of the most accomplished performers in the world (Harung *et al.,* 1995, 1996). This investigation found that the world-class performers had much more frequent glimpses of higher states of consciousness than the general public. Four effects of such advanced development on time management are:

(1) *Least action* – according to physics, all known laws of nature function in accordance with the principle of least action – action involving the least expenditure of time and energy (Hagelin, 1987, 1989). In higher states of consciousness it is projected that we act in accordance with this principle of economy in nature. The term least action 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).

The investor Warren Buffet, one of the wealthiest persons in the world, seems to exemplify least action. "From his experience, Buffet has learned that good businesses enable the investor to make an easy decision, but tough businesses require difficult decisions. If the decision to purchase a business is not easy, he will not pursue the company" (Hagstrom, 1997, p. 66).

(2) *Fortunate coincidences* – support of nature (or action in accordance with natural law) may appear to those without prior exposure to this concept as fortunate coincidences – a factor to which many leaders (Kouzes and Posner, 1987) and organizations (e.g. Harung, 1996b) attribute their success. 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.

(3) *Timely action* – so far we have dealt with performing right action in the most effective way. In addition, for our behavior to yield optimum results, it is necessary that the most appropriate time is chosen for each action (Harung, 1997). Thinking and action in tune with natural law is held to spontaneously respond to the "need-of-the time", and will therefore always be timely for the individual as well as for the surroundings (Maharishi, 1995a).

Torbert (1991, pp. 270) appears to relate development beyond self-actualization to uniquely *timely* action: "What is up to me (and no one else) to do at this particular moment in my life and in the life of the group/organization/nation with which I am interacting."

(4) *Living in the present* – living in the present offers more possibility for effective action and satisfaction with our life. Quite often people place extensive emphasis on a glorified picture of the past. Or they live with anxiety for the future or regret for the past (Huxley, 1947). Effectiveness involves learning from the past and being mindful of the future consequences of our actions. But over-attention to the past and future limits capacity to be successful in the present since it is the arena where we can shape a better life. Through contact with timeless transcendental consciousness, it is anticipated that life will be lived in "the moment – the life now" (Huxley, 1947, p. 215), and with a balanced happy attitude to the past, the present, and the future. The need to live in the present is illustrated by the aphorism in Figure 4 by the Danish philosopher Piet Hein.

Least action and timelessness have been described by many dynamic individuals. Sir Roger Bannister was the first person in the world to run a mile in less than four minutes – one of the greatest accomplishments in the history of athletics. On the particular day of May 6, 1954 the "ingredients" needed for

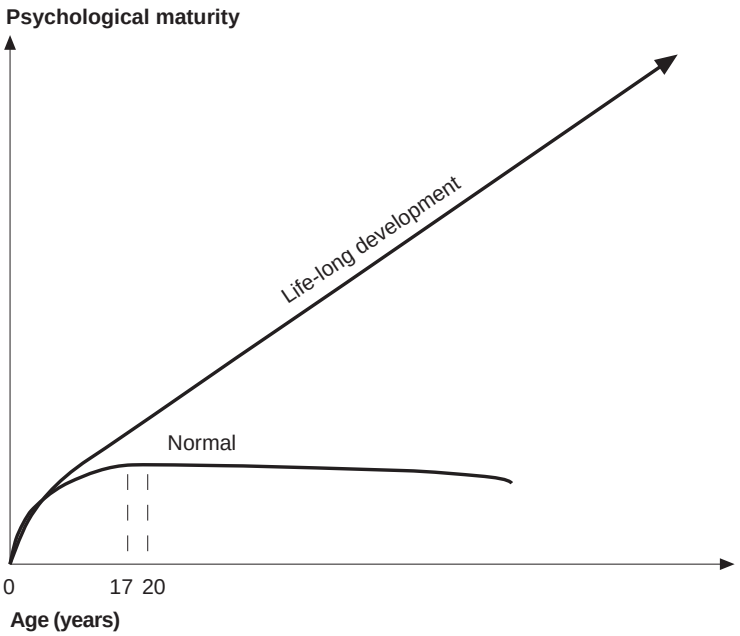


Figure 4.
Prolonged life through psychological maturity

peak performance seemed to come together. Before the event there had been a gale-force wind that fortunately died down momentarily just before the start. Bannister describes his experience using words like:

> I had reached my peak physically and psychologically. There would never be another day like it… The gun fired… Brasher went into the lead and I slipped in effortlessly behind him, feeling tremendously full of running. My legs seemed to meet no resistance at all… We seemed to be going so slowly…I was relaxing so much that my mind seemed almost detached from my body. There was no strain… My mind took over. It raced well ahead of my body and drew my body compellingly forward. I felt that the moment of a lifetime had come. There was no pain, only a great unity of movement and aim. The world seemed to stand still, or did not exist… I felt at that moment that it was my chance to do one thing supremely well… I knew I had done it before I even heard the time… (Bannister, quoted in Pearson, in press, p. 297).

There are several words which indicate that this was a glimpse of higher states of consciousness. The experience of deep inner silence, which remains unshaken even in the most dynamic activity, is indicated by "I was relaxing so much that my mind seemed almost detached from my body". Enjoying least action is suggested by "there was no strain" and "my legs seemed to meet no resistance at all". Even though Bannister was running faster than anyone else at that time, he used words like "we seemed to be going so slowly" and "effortlessly" to describe his experience. At the same time, words like "the world seemed to stand still" indicates that he was experiencing a state of timelessness in the midst of highly dynamic activity.

Applying the above principles to timely management, Maharishi (1995a, p. 35) explains that "this means that whatever managerial skills or techniques

or communication skills are needed at any time, in any place, or in any circumstance, the manager will have access to it in his awareness".

Can we escape the time trap?

This sub-section considers the possibility of going beyond the limitations of time. We start by examining in more detail transcendental consciousness. Then follows some thoughts on freeing ourselves from the collective mentality prevalent in society. Finally, we investigate if psychological time can be unlocked from thermodynamic time.

Further features of transcendental consciousness – a study of the subjective experiences of transcendental consciousness, as brought about in a systematic way by the Transcendental Meditation technique, was carried out at the University of Trondheim, Norway (Severeide, 1990). Along the lines of other investigations, this study revealed that during the TM technique, the mind gradually settles down until transcendence is reached: "It felt as if consciousness expanded and suddenly I passed into a state…unbounded in time and space. After some moments, I am not sure how long, suddenly I came out…" (p. 1570). Another experience was that "time disappears more and more…" (p. 1574) until transcendental consciousness is reached, where "time did not seem to exist, a feeling of timelessness. It neither moves fast nor slow, a kind of pause of time" (p. 1573) and "no sense of time, just the present, non-changing 'now'" (p. 1574).

This experience of timelessness or a non-changing eternal now is also reflected by Torbert (1991, pp. 266-67):

> Although references to eternity usually connote an unimaginably long time, understood mathematically and poetically eternity is in fact instantaneous – a dimension of time orthogonal to durational time, always and only accessible through wider awareness in the present moment.

Freeing ourselves from collective mentality – earlier on we have argued that the majority of adults in society are conventional, i.e. they are strongly influenced in their thought and behavior by the commonly accepted world view (Gustavsson and Harung, 1994; Torbert, 1991). McMaster (1996) uses the example of a menu at a restaurant. We can freely choose what we want as long as it is listed, but we are not expected to request a dish which is not on the menu. In contrast to the conventional range of development, the postconventional domain is characterized by the ability to think autonomously, independent of the collective mentality prevalent in the social systems we are embedded in (Harung *et al.*, 1995, 1996).

Severeide (1990) found that during transcendence "the mind is completely unlocalized…just an expanded feeling of unboundedness" (p. 1571), with "tremendous peace" and "a feeling of having gone beyond limitations" (p. 1574). One additional feature of transcendental consciousness is "self-referral", signifying that consciousness refers only to itself (Maharishi, 1986). In higher states of consciousness, this self-referral consciousness is said to coexist with

object-referral (= referring to outer objects), but self-referral is primary (Harung, 1997). It therefore appears that higher states of consciousness bring to fulfillment the maturation of freedom, self-sufficiency, and autonomy, indicating that the individual becomes fully liberated from the binding influence of collective mentality.

Disconnecting psychological and thermodynamic time – as seen earlier, Hawking (1989) argues that psychological and thermodynamic time coincide. But why do they have to coincide? Perhaps this locking of our subjective experience of time to a particular objective time is just another artifact of collective mentality? Since the second law of thermodynamics has widespread influences all around us, there is an obvious reason for being captivated by this particular mode of object-referral. Yet, maybe with the permanent establishment of higher states of consciousness we would be able to see through this disguise and experience a dimension of reality that is independent of the second law of thermodynamics; a dimension that does not create disorder, but that instead creates order – the unified field of natural law (Hagelin, 1987, 1989; Maharishi, 1995b).

The possibility of unlocking psychological time from thermodynamic time can be illustrated by an example. Assume that the thermodynamic arrow of time is like a *conveyor belt*. Movement along a conveyor belt gives change that occurs in a set unidirectional sequence. But what may turn out to be an amazing phenomenon, is why we, as humans, are stuck to move along unilaterally with the belt, more or less at the same speed?

Langer *et al.* (1990, p. 125) writes that "whereas in classical physics and common sense, space and time are distinct, Einstein has demonstrated that they can be seen as reciprocal phenomena", i.e. that time and space to a considerable extent are interchangeable. We know that we can move backward and forward in space. Why then, should we be restricted to only move unilaterally in time? Clock time could be the same irrespective of the arrow of time being towards increasing order or disorder.

Perhaps the arrow of time, as we normally experience it, is related to a psychological or subjective notion. If we could liberate ourselves from the *habit force* of time, we would be free to move both ways along the conveyor belt. On this ground, we suggest that to escape the time trap, the only requirement is to liberate ourselves from the binding influence of the common notion of time.

What will be the effects of escaping the time trap? First, with reference to a manager, Maharishi (1995a, p. 36) writes that "he will learn to spontaneously manage time on the ground of the timelessness of Natural Law". A second consequence may be a marked prolongation of life. This is illustrated by Figure 4[2]. This figure can be explained with reference to the mental levels in Figure 3. When the mind is restricted to the most surface level, i.e. object-referral alone, we are captivated by objective time and life-span tends to be limited. As we unfold deeper mental levels, we increasingly refer within, gain more freedom from objective time, and live longer. This leads to the third consequence: with

self-referral fully unfolded, we free ourselves from the binding influence of time. In this state it may be natural to accomplish all that we may desire in life.

Also from the perspective of theme 1, higher states of consciousness seems to form the basis of a prolonged life – transcendental consciousness is accompanied by intense happiness. "A most pleasant and satisfying feeling" and "…a feeling of exhilaration" (Severeide, 1990, p. 1571). Other related expressions used to describe this most fundamental level of awareness were "total fulfillment" and "blissful awareness" (p. 1574). With such lasting happiness in higher states of consciousness, it seems natural that we desire to live long. And seen from the perspective of nature, since we have reached a high degree of perfection, it may be of interest to ecological evolution to preserve our life for a long time.

Development of higher states of consciousness

Longitudinal studies have found that the regular use of the Transcendental Meditation and the advanced TM-Sidhi program leads to more frequent experiences of higher states of consciousness. For example, Cranson *et al.* (1991) investigated the relationship between measures of intelligence and experiences of higher states of consciousness. Cranson tested students at Maharishi University of Management and another control university and then retested them two years later. The 55 control students did not improve significantly during this period on any measure. The average response of the 45 MUM students to a question relating to higher states of consciousness increased significantly. At the same time their scores on fluid intelligence and choice reaction time tests also improved significantly, compared to controls. Scores on the intelligence and reaction time tests were significantly correlated with the degree of development of higher states of consciousness.

Conclusion

Time is a primary resource. The common experience is that we are limited by lack of time, and that time is not used in an effective way. The key to improved time management – to have more time available through a longer life and to accomplishing more with less effort – lies in the development of human consciousness to higher stages of happiness, effectiveness, freedom, and comprehension. In the most advanced domain of human unfoldment, higher states of consciousness, we may gain freedom from the binding influence of time so that time ceases to be a factor limiting our achievements in life.

Notes

1. Mind has two connotations in this paper: the particular level of mental life associated with thinking and memory; and the holistic mental structure that encompasses all mental levels, including the particular level associated with thinking and memory. It will be evident from the context which meaning is intended.
2. The idea of this figure is due to Jaan Sürkula of Sweden, personal communication.

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