

Human Development and Capability: Reconstructed and Fulfilled Through Maharishi Vedic Science

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Abstract: This paper reconstructs the concept of human development in light of Maharishi Vedic Science. In Maharishi Vedic Science, the fulfillment of human development is realised in higher states of consciousness. In higher states of consciousness, the mind, body and senses still function in daily life, but at a much more refined and integrated state of functioning. The key aspect of human development explored is that of human capabilities, through the concept called the ‘Capability Approach’. The Capability Approach places the importance on people’s ability to have freedoms (capabilities) to lead the kind of lives they want to lead, to do what they want to do and to be the person they value and want to be. The major constituents of the Capability Approach are ‘functionings’ and ‘capabilities’. A ‘functioning’ being an achievement, and a ‘capability’, the ability to achieve the functioning. Maharishi Vedic Science places human consciousness at the level underlying that of capabilities, essentially, an underlying *Universal Capability* which allows any individual to naturally and spontaneously develop the full range of functionings, leading to the fulfilment of human development in everyday life. The growth of human consciousness and subsequent fulfillment of dimensions of human development is then explored through published scientific research studies on those practicing Maharishi’s Transcendental Meditation and TM-Sidhi program (the means to contact and enliven this field of human consciousness).

Keywords: Sustainability, Capability, Human Development, Maharishi Vedic Science, Consciousness

1. Introduction

This paper, one of a series on sustainability and Maharishi Vedic Science (Fergusson, 2017), takes the view that both the prerequisite and goal of sustainability science depend on human development. In short: people are the real wealth of nations. The present paper explores this proposition from the perspective of Maharishi Vedic Science and its relation to human capabilities.

Arguably the most widely used definition of sustainability, initially applied in the context of ‘sustainable development’, is from the Brundtland Report (World Commission on Environment and Development, 1987), which states:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” While the term ‘sustainable development’ may not have been widely used prior to the Brundtland definition, the central theme on ‘meeting the needs of the present without compromising the ability of future generations to meet their own needs’ had been used throughout the international literature as early as the 1970s. For instance, the writings of Barbara Ward (the first President of the International Institute for Environment and Development, IIED) used the terminology of meeting the

‘inner limits’ of human needs and rights without exceeding the ‘outer limits’ of the planet’s ability to sustain life, now and in the future (Satterthwaite, 1999). Satterthwaite (1999, p. 6) states that “the main differences in interpretation are not so much in what is covered as in the extent to which emphasis is given to one or more of three aspects: 1) meeting human needs; 2) sustaining or keeping intact natural capital (including both natural resources and ecosystems) at local, regional and global levels; and 3) ensuring that human activities or values can be ‘sustained’ (for instance, as in discussions of economic or social ‘sustainability’)”.

This paper places the sustainability emphasis on human development. For while in agreement with the ‘strong sustainability’ approach where the social, economic and environmental aspects are intersecting circles and of their non-substitutability, this paper places primary importance on human development, the purpose of life being for human evolution or progress within the community of all life. As Gus Speth, the distinguished U.S. environmental advocate, told a BBC radio audience in 2014, “I used to think the top environmental problems were biodiversity loss, ecosystem collapse and climate change....I thought that, with thirty years of good science, we could address those problems. But I was wrong. The top environmental problems are selfishness, greed and apathy. To deal with those we need a spiritual and cultural transformation, and we scientists don’t know how to do that” (Oram, 2016, p. 96).

2. Human Development

The concept of ‘Human Development’ has evolved from the United Nations Development Programme (UNDP), Human Development Reports, published yearly from 1990 to 2015. The inclusion of Human Development has come about with the growing awareness of the need to rethink the role of economics in the making of policy and defining the goals for humanity. “The economy should not be the master of people’s lives, but the servant of human flourishing”, according to Alkire (2010, p. 67). As Neumayer put it in his Human Development Research Paper on ‘Human Development and Sustainability’ “On a very fundamental level, human development is what sustainability proponents want to sustain and without sustainability, human development is not true human development” (Neumayer & UNDP, 2010, p. 1).

For this paper, the definition of Human Development is the one used in the latest 2015 Human Development Report, Box 1:

“Human development is a process of enlarging people’s choices – as they acquire more capabilities and enjoy more opportunities to use those capabilities. But human development is also the objective, so it is both a process and an outcome. Human development implies that people must influence the process that shapes their lives. In all this, economic growth is an important means to human development, but not the goal. Human development is development *of the people* through building human

capabilities, *for the people* by improving their lives and *by the people* through active participation in the processes that shape their lives”. (UNDP, 2015, p. 2)

The latest UNDP Report lists seven dimensions of human development under two headings (UNDP, 2015, pxii): 1) three dimensions of directly enhancing human capabilities (i.e., Long and Healthy Life, Knowledge, and Decent Standard of Living); and 2) four dimensions of creating conditions for human development (i.e., Participation in Political and Community Life, Environmental Sustainability, Human Security and Rights, and Promoting Equality and Social Justice). For this paper, our focus is on enhancing human capabilities due to the extensive work carried out on the construct called the ‘Capability Approach’.

3. The Capability Approach

The Capability Approach was first articulated by the Indian economist and philosopher Amartya Sen in the 1980s. Sen (1980) first introduced the concept of capability in his Tanner Lectures on ‘Equality of What?’, and his (1999) most influential and comprehensive account was his ‘Development as Freedom’. The Capability Approach places the importance on people’s ability to have the freedoms (i.e., the ‘capabilities’) to lead the kind of lives they want to lead, to do what they want to do and to be the person they value and want to be. The concept of the Capability Approach has attracted many scholars, including the philosopher Martha Nussbaum, whose initial work on human capabilities began independently of Sen’s work when focusing on the predicament of poor women in India (Nussbaum, 2000, p. 70). While similar to Sen’s approach, Nussbaum’s is different both in its emphasis on the philosophical underpinnings of the approach and its readiness to take a stand on what the central human capabilities are. Nussbaum points out that “Sen has focused on the role of capabilities in demarcating the space within which quality of life assessments are made; I use the idea in a more exigent way, as a foundation for basic political principles that should underwrite constitutional guarantees.” (Nussbaum, 2000, p. 70). Despite these procedural differences, both Nussbaum and Sen agree on the fundamental concept of human capabilities, and have pioneered the overall Capability Approach, as founding presidents of The Human Development and Capability Association (HDCA) in 2004. The HDCA publishes *The Journal of Human Development and Capabilities*, which is affiliated with the UNDP.

The major constituents of the Capability Approach are ‘functionings’ and ‘capabilities’. A ‘functioning’ is an achievement, whereas a ‘capability’ is the ability to achieve the functioning. “The capability approach conceptualises a metric of well-being (in terms of functionings) and well-being freedom (in terms of capabilities)” (Robeyns, 2016). “The relevant functionings can vary from such elementary things as being adequately nourished, being in good health, avoiding escapable morbidity and premature mortality, to more complex achievements such as having a decent and

valuable job, not suffering from lack of self-respect, taking active part in the life of the community and so on” (Robeyns, 2016). Human functionings are those ‘beings and doings’ that we take to constitute a human life, and which are central in our understanding of ourselves as human beings.

Capabilities are often called Opportunities or Real Freedoms. “Opportunity Freedom refers to people’s actual ability to achieve a tangible goal. It is not a paper freedom. The capacity to enjoy healthcare requires that the health clinic exist, the clinic is staffed, that medical supplies are stocked, and that the patient is not refused treatment for lack of money, gender, race, age, or religion. If the right to free speech is enshrined in the constitution, but violated in practice, then there is no capability” (Alkire, 2010, p. 41). It can be seen that the selection of capabilities is more wide-ranging and would be different when the question is how to arrange a society’s basic structure, versus how to spend Oxfam donations, or how to raise one’s child.

It can be seen that while the fundamental insight of the Capability Approach is remarkably simple, the question of how to measure ‘capability’ is not straightforward. Functionings are generally easier to observe and measure than capabilities. Sen purposely did not specify what to measure, as he considered each assessment had to be

developed with reference to each individual particular circumstance. Others, however, like Nussbaum, had the view that without some specification, and simplification, the capability approach was difficult to use efficiently. The challenge is to simplify it without introducing significant distortions in the process. Two respected researchers that have created well-thought out lists from slightly different perspectives are Nussbaum’s list of ten ‘central human capabilities’ (Nussbaum, 2011) and Finnis’s 1987 seven ‘basic reasons for action’ (Grisez, Boyle & Finnis, 1987), refer Table 1. Alkire proposes Finnis’s basic reasons for action, or dimensions of human flourishing or functionings, as a complete set of the most basic reasons for which people act in seeking ‘wholeness’ or ‘well-being’, in pursuing normative ‘human development’ (Alkire, 2002, p. 52). Table 1 shows that while there are some differences (such as Nussbaum’s inclusion of Emotion, Other Species and Control Over One’s Environment, and Finnis’s inclusion of Transcendence/Religion), there are many similarities in terms of life, education/knowledge, practical reasonableness, affiliation/friendship and work/play. These are similar to the three UNDP Human Development dimensions of directly enhancing human capabilities of Long and Healthy Life, Knowledge and Decent Standard of Living.

Table 1. Central Human Capabilities and Basic Forms of Human Good.

Ten Central Human Capabilities (Nussbaum, 2011), Being able to...		Finnis’s Seven Basic Reasons for Action (Forms of Human Good) (Grisez <i>et al.</i> , 1987)	
Life	live to the end of a human life of normal length.	Life	As animate creatures, we are motivated to live and continue living. For this we need food, health and safety.
Bodily Health	have good health, adequately nourished and adequate shelter.		
Bodily Integrity	move freely from place to place, secure against violent assault, and choice in matters of reproduction.	Knowledge and Aesthetic Experience	Beyond basic living, we find pleasure and value in learning and experiences that can help us learn.
Senses, Imagination and Thought	use the senses to imagine, think and reason and to do things in a “truly human” way, a way informed and cultivated by an adequate education.		
Emotion	in general, to love, to grieve, to experience longing, gratitude and justified anger.	Self-integration	We are seldom in harmony within ourselves as different values and beliefs conflict. This conflict itself causes inner stress and as much as we can integrate and harmonize our inner selves, the more we can live at peace.
Practical Reasoning	form a conception of the good and to engage in critical reflection about planning one’s life.	Self-expression (or practical reasonableness)	In seeking to find harmony, we both work within and without, interacting with the world that reflects our inner personality and drives.
Affiliation	(A) to live with and towards others, to recognise and show concern for other human beings; and (B) have the social basis of self-respect and non-humiliation.	Friendship	Beyond basic achievement we find pleasure in connecting with other people, forming close bonds that affirm and extend our sense of identity.
Other Species	live with concern for and in relation to animals, plants, and the world of nature.		
Play	laugh, to play, to enjoy recreational activities.	Excellence in Work and Play	When we act, we can do so casually or with more intense purpose. This can be found in both work and play contexts.
Control Over One’s Environment	(A) Political: participate effectively in political choices that govern one’s life; and (B) Material: hold property (both land and moveable goods) and being able to work as a human being.	Transcendence (or Religion)	In many ways, we have a need for a God of some kind, or at least something to believe in that offers deeper meaning and transcendence beyond our humdrum lives.

4. Maharishi Vedic Science and the Fulfilment of Human Development

In this section, we first present an overview of Maharishi Vedic Science and then explain the two major points of difference between the conventional understanding of human development and the Maharishi Vedic Science definition of human development with respect to higher states of consciousness. We explain how Maharishi's technologies of consciousness, the Transcendental Meditation and TM-Sidhi program, help bring about these higher states of consciousness and how the theoretical framework provided by Maharishi Vedic Science explains how the ultimate fulfilment of human development is gained and lived through higher states of consciousness. The term "Vedic Science" is used by Maharishi to indicate both the ancient, traditional origins of this body of knowledge (i.e., the "Vedic tradition") and its modern commitment to experience, systematisation, testability and the demand that knowledge be useful in improving the quality of human life. The testability and replication of demonstrable benefits across a wide spectrum of human development functionings is presented in the next section.

The lead paper to this Special Issue provides an overview of Maharishi Vedic Science (Fergusson *et al.*, 2017, p. 3). Maharishi explains that this knowledge is eternal pure knowledge as it was developed by the great masters of the Vedic tradition through exploration of their own consciousness; that same level of consciousness available to us all and thus common to us all. Maharishi states that this "complete knowledge of consciousness is the complete knowledge of the basic reality of life, which is available to everyone in the field of one's own Transcendental Consciousness through Transcendental Meditation" (Maharishi Mahesh Yogi, 1994, p. 56).

Maharishi explains that this field of consciousness can be seen as another name for nature's intelligence, that intelligence responsible for maintaining orderliness throughout all of creation in an evolutionary and progressive direction. In modern science, it is sometimes referred to as the Unified Field. For ourselves, consciousness can be viewed as an 'inner awareness', an 'inner or holistic intelligence'. By contacting this field of consciousness through the Transcendental Meditation and TM-Sidhi program, Maharishi (2001, p. 33) explains that "...the conscious capacity of the mind is enlarged and the whole ocean of the mind becomes capable of being conscious. The full mental potential is thus unfolded, and the conscious capacity of the mind is increased to the maximum limit". It is this increased capacity of the mind, from that field of transcendental consciousness, that field of nature's intelligence, which allows the individual to naturally develop and live the full potential of human life, leading to the fulfilment of human development.

To explain how all the aspects of human development, including the environmental and social, physiological and psychological aspects, can be simultaneously impacted in a

positive and evolutionary direction through the practice of Transcendental Meditation, it is useful to look at a diagram of the different domains of life and levels of the mind, along with the process of transcending during Transcendental Meditation, as shown in Figure 1. This Figure indicates that it is through the most active and concrete level of mental functioning, the faculties of action and the senses, the physiological level of life, that one interacts with the outer environmental and social domains of life. The more subtle, psychological levels of the mind are those of the 'thinking mind', intellect, feelings and ego.

Maharishi explains that the mind is hierarchically structured in layers that are progressively more subtle, abstract and more unified and only after having transcended all the layers of the objective and subjective levels of the mind, through Transcendental Meditation, does one arrive at the state of pure consciousness, pure intelligence, pure Being, in transcendental consciousness, the ultimate of life (Maharishi, 1969, pp. 240-245, 2001, pp. 27-29).

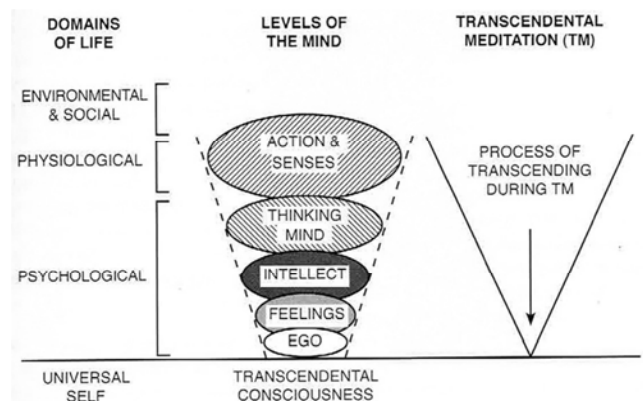


Figure 1. Domains of life, levels of the mind, and Transcendental Meditation (cited in Alexander, Robinson & Rainforth, 1994).

As one practices the Transcendental Meditation program, and in particular the more advanced TM-Sidhi program, the stresses in the body systematically dissolve, and as a result, the experience of this pure consciousness, pure intelligence, grows stronger and more stable. Maharishi compares this process to the traditional method of dyeing cloth:

"...we dip a white cloth in a yellow dye and let it remain in the dye to be coloured for a few minutes. Then we take it out and expose it to the sun till the colour begins to fade. We repeat the same process, again putting the cloth into the sunlight till the colour fades. Similarly we meditate for about half an hour and follow this by coming out to act in practical life for about ten hours, by which time we begin to feel that we are out of the influence of the morning meditation. We meditate again in the same way and again let the influence fade by coming out into practical life; we keep repeating the process of gaining the state of universal Being in transcendence during meditation and of coming out to regain individuality in the field of relative existence. This allows more and more infusion of Being [i.e., the Self] into the nature of the mind even when engaged in activity through the senses." (Maharishi, 1969, p. 313)

The conscious capacity of the mind is thus enlarged through the development of higher states of consciousness. Maharishi Vedic Science explains that there are seven states of consciousness. Beyond waking, dreaming, and sleeping, there are four higher states of consciousness, Transcendental Consciousness, Cosmic Consciousness, Refined Cosmic Consciousness and Unity Consciousness – “higher” in that each one brings a dynamic expansion of our knowledge and experience, of ourselves and our world around us. As we develop higher states of consciousness, we develop maximum creativity and intelligence based on perfect physiological integration and balance. Maharishi explains that each state of consciousness has its corresponding physiology and awareness, “...from zero level of awareness, zero level of intelligence (sleep state) to the infinite, unbounded level of fully awake, fully alert state of consciousness (self-referral Unity Consciousness) the physiological structure and function is different”, (Maharishi, 1993, p. 446). Gaining higher states of consciousness means gaining increasing support of nature’s intelligence, with the ability to naturally live higher states of human development.

This leads on to the two major points of difference between the conventional understanding of human development and the Maharishi Vedic Science definition of human development with respect to higher states of consciousness, those being: 1) Maharishi Vedic Science sees the fulfilment of human development is living in higher states of consciousness; and 2) Rising to higher states of consciousness is through contacting one’s inner Self, one’s own self-sufficient inner awareness that does not require anything external for its existence. That is, Maharishi Vedic Science sees the fulfilment of human development on the self-sufficient ground of inner awareness, by contacting ones inner Self. Maharishi explains it as:

“...raise his self by his Self”. No help from outside is required. A man has in himself everything he needs to rise to any height of perfection. Nothing of the world is needed to elevate the self; no method is to be adopted, no means to be sought. The self is elevated by the Self alone.” (Maharishi, 1969, p. 395)

It is important to explain two points in the above quote: a) Maharishi’s use of the ‘small self’ (using the small ‘s’) and the ‘big Self’ (using the capital ‘S’); and b) his statement that ‘no method is to be adopted’. First, Maharishi uses the ‘small self’ when referring to the developing self, the self that is in the process of rising up to higher states of consciousness, and the ‘big Self’ when referring to the ‘fully realised’ inner Self, the transcendental Self or Universal Self, an abstract, silent, unified field of pure consciousness, identified as the self-sufficient source of all mental processes. Second, while Maharishi’s Transcendental Meditation and TM-Sidhi program can be seen as a ‘methodology’ to systematically develop higher states of consciousness, it is not a ‘method’ as described in the above quote. Maharishi uses the following analogy to explain how his Transcendental Meditation and TM-Sidhi program functions:

“Meditation does not unfold the Self—the Self, it must be

repeated, unfolds Itself by Itself to Itself. The wind does nothing to the sun; it only clears away the clouds and the sun is found shining by its own light. The sun of the Self is self-effulgent. Meditation only takes the mind out of the clouds of relativity. The absolute state of the Self ever shines in Its own glory.” (Maharishi, 1969, p. 396)

That is, the Transcendental Meditation and TM-Sidhi program (the wind) does not in itself raise man to the height of perfection in higher states of consciousness; it is the underlying, ever-present, unified field of pure consciousness (the sun that is always there), that does all the work; one just needs to contact It and then It takes care of the rest. It is interesting to note Maharishi’s human development focus on the inner Self with the words of ‘unfolds Itself by Itself to Itself’ compared to the UNDP 2015 Human Development Report (stated in the previous Section 2) which uses the words “of the people for the people by the people.”, which has more of an external flavour. This is not to say that Maharishi’s human development does not develop the ‘people’, but it stresses that first you develop one’s ‘inner Self’, then the developed ‘self’ acts to simultaneously develop and fulfil all the dimensions of human development, on both the internal (subjective, inner Self) and external (objective or relative) aspects of life.

Therefore, from the perspective of Maharishi Vedic Science, the ability to ‘acquire more capabilities and enjoy more opportunities to use those capabilities’ comes from developing the individual’s full mental potential from that source of pure-intelligence, one’s own field of transcendental consciousness, through the practice of the Transcendental Meditation and TM-Sidhi program. Because this source of pure-intelligence underlies and maintains orderliness throughout all of creation in an evolutionary direction, it can be likened to an underlying *Universal Capability*, which naturally and spontaneously supports all areas of capability. With infusion of this field of pure intelligence into all levels of the mind when coming out into activity after meditation, all the psychological, physiological and environmental and social domains of life are enlivened, leading to the fulfilment of human development.

Maharishi’s simple formula is meditate and act—practice Transcendental Meditation, then engage in dynamic and life-supporting activity. One of the benefits that Maharishi has brought to the world, through the Transcendental Meditation program, is that meditation is not just for the recluse, and the privileged few. As stated by Maharishi (1994, p. 56) “...it is available to everyone in the field of one’s own Transcendental Consciousness through Transcendental Meditation.” We now turn to the testability and replication of demonstrable benefits of the practice of the Transcendental Meditation and TM-Sidhi program across a wide spectrum of human development functionings.

5. Experimental Paradigm and Demonstrable Benefits

The Maharishi Vedic Science experimental paradigm and

the replication of demonstrable benefits is presented below. Selected scientific research studies are presented demonstrating the potential of Maharishi's Transcendental Meditation and TM-Sidhi program to have measurable benefits across a wide spectrum of human development functionings and the development of higher states of consciousness.

Many lists of human development functionings or well-being have been advanced. For example, Alkire (2002, Table 2.12, pp. 78-84) tabulated 39 lists of dimensions of human development from different disciplines. Two of these, for Nussbaum and Finnis, were presented in Table 1 of Section 3 of this paper. To summarise and categorise the extensive research on the Transcendental Meditation program in light of the fulfilment of human development, a table of seven dimensions of human development has been developed. The seven selected dimensions are: 1) Life/Health; 2) Knowledge/Understanding; 3) Emotions; 4) Practical Reasoning; 5) Friendship/Affiliation; 6) Work/Play; and 7) Transcendence or Religion. Research studies on an eighth dimension of higher states of consciousness is also included.

The selected scientific research studies have been selected as the most representative of the total of approximately 600 published experimental, quasi-experimental, meta-analytical, descriptive, theoretical and mixed-method studies that have been conducted over the last 50 years at over 280 universities, research institutes, and government or private organisations in 33 countries, published in more than 160 academic journals.

1) Life/Health. Life and health is probably the most researched field of the benefits from the practice of Transcendental Meditation. Examples of health benefits are given below with respect to lower biological age and other health benefits in the elderly. For the general population, examples are given such as lowering blood pressure, decreased cholesterol levels and improved sleeping and dreaming patterns. For rehabilitation, decreased substance abuse and improved behavioural changes and recidivism of prison inmates have also been measured.

With respect to the elderly, studies have shown multiple benefits, such as younger biological age compared with control subjects and population norms (with the length of time practicing Transcendental Meditation correlated with reduction in biological age, refer Figure 2), reduction of systolic blood pressure, improved mental health, increased learning ability and a greater sense of well-being (Alexander *et al.*, 1982).

Reported general population health benefits include lower systolic blood pressure (Blackwell *et al.*, 1975; Wallace *et al.*, 1983) [Note: The American Heart Association (Brook *et al.*, 2013) stated that the Transcendental Meditation technique is the only meditation practice that has scientifically been shown to lower blood pressure, and also reported the finding that lower blood pressure through Transcendental Meditation practice is associated with substantially reduced rates of death, heart attack and stroke]; improved cardiovascular functioning (Zamarra, Schneider, Besseghini, Robinson, &

Salerno, 1996); decreased cholesterol levels, see Figure 3 (Cooper & Aygen, 1978); improvements in bronchial asthma (Honsberger & Wilson, 1973); reduced epileptic seizures (Subrahmanyam & Porkodi, 1980); better periodontal health (Seiler & Seiler, 1979); improved sleeping and dreaming patterns (Fuson, 1976); and decreased hospitalisation and doctor visits (Orme-Johnson, 1987).

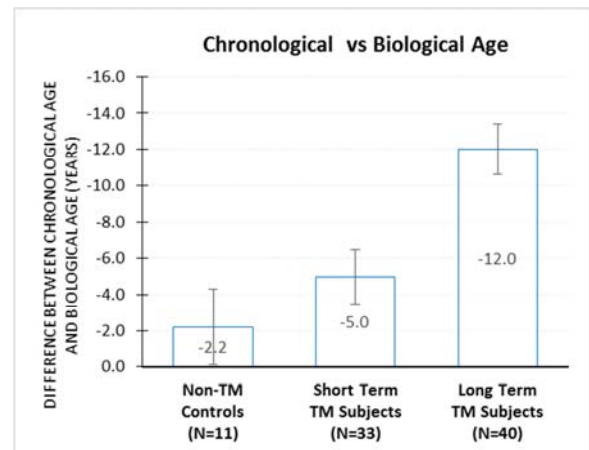


Figure 2. Mean and standard error for the difference between biological age and chronological age by group, unadjusted for diet (Note: While subjects who excluded red meat did have younger biological ages (these were also Transcendental Meditation participants), the effect of the Transcendental Meditation program was independent of diet) (Wallace *et al.*, 1982).

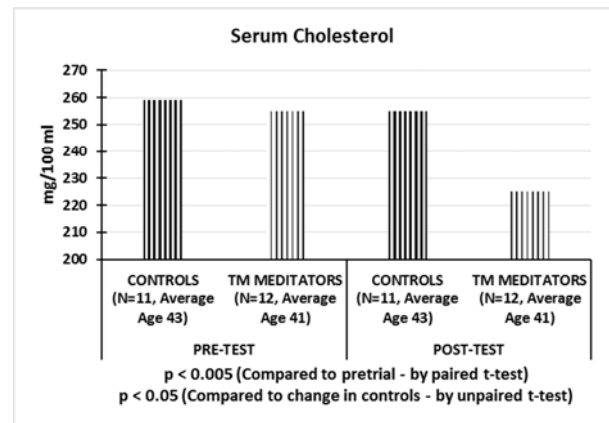


Figure 3. Change in serum cholesterol in hypercholesterolemic subjects (Cooper & Aygen, 1978).

In terms of rehabilitation, positive benefits have been reported for decreased drug abuse, use of alcohol and cigarettes (Alexander *et al.*, 1994; Benson & Wallace, 1972; Shafii *et al.*, 1975) and behavioral changes and recidivism of prison inmates (Alexander *et al.*, 1982; Alexander & Marks, 1982; Boudigues, 1990).

2) Knowledge/Understanding. Increased knowledge and understanding has been measured across all age groups, from children, high school and college students, adults and the elderly. Increased intelligence, creativity and learning ability with the practice of Transcendental Meditation has been reported in children (Dillbeck *et al.*, 1990), high school students (Kotchabhakdi *et al.*; Tjoa, 1975), college students (Aron *et al.*, 1981; Cranson *et al.*, 1991), adults (Travis,

1979) and the elderly (Alexander *et al.*, 1989; Nidich *et al.*, 2005).

3) Emotions. On the level of emotions, feelings have been measured with respect to one's own feelings and those towards others. Feelings were measured with an increase in sensitivity to one's own needs and feelings (Hjelle, 1974; Nidich *et al.*, 1973), a greater sensitivity to other's needs and feelings (Baer *et al.*, 1984) and less pronounced feelings of social inadequacy (Hanley & Spates, 1978).

4) Practical Reasoning. For practical reasoning, benefits measured have included, increased self-reliant, practical, logical, and realistic behavior (Throll, 1978) and increased ability to be objective, fair minded, and reasonable (Marcus, 1977).

5) Friendship/Affiliation. Increased friendship has been measured in terms of better relationships and perceptions of others both in the general population and in prison inmates. Better relationships have been measured by increased sociability and maturity (Aron *et al.*, 1981; Hanley & Spates, 1978), improved perception of others (Holeman & Seiler, 1979) and greater capacity for warm interpersonal relationships in university students (Chandler *et al.*, 2005) and prison inmates (Alexander & Marks, 1982).

6) Work/Play. In the workplace, studies have shown positive benefits both in terms of productivity and performance, personal health and other more subjective qualities such as job satisfaction and relationships with others.

Three papers that have summarised the research findings and theoretical principles behind the effectiveness of the Transcendental Meditation program in the business environment found: increasing intelligence in improving job performance and related variables in the business setting (Herron & Graff, 1990); simultaneous promotion of creativity, health and teamwork – the three human resource qualities that are vital for success in the future business environment (Schmidt-Wilk & Heaton, 1990); and in the workplace indications of improved employee health, increased job satisfaction, improved job performance and productivity and improved organisational performance and climate (Schmidt-Wilk *et al.*, 1996).

An example of a study on Transcendental Meditation participants, a control group and co-workers (Frew, 1974) found increased productivity; increased job satisfaction; improved job performance; decreased turnover propensity; improved relations with supervisors; improved relations with peers; decreased self-report climb orientation/increased climb orientation as reported by co-workers and supervisor when compared to the control group (see Figure 4). Another study found improvements in general physical and mental well-being in industrial workers (Haratani & Hemmi, 1990).

Measured positive benefits in the area of 'play' have been found in improved mind/body coordination and athletic performance and the reduced need for external stimulation (perhaps an indicator of enjoying something for its own sake).

Improved mind-body co-ordination was measured with

faster reactions (Appelle & Oswald, 1974; Holt *et al.*, 1978). Promotion of athletic performance was measured by decreased metabolic rates, improved cardiovascular and respiratory efficiency and improved neuromuscular integration (Reddy, 1976). A reduced need for external stimulation measured by Friend (Friend & Maliszewski, 1978) may indicate that aspect of play where something is enjoyed for its own sake.

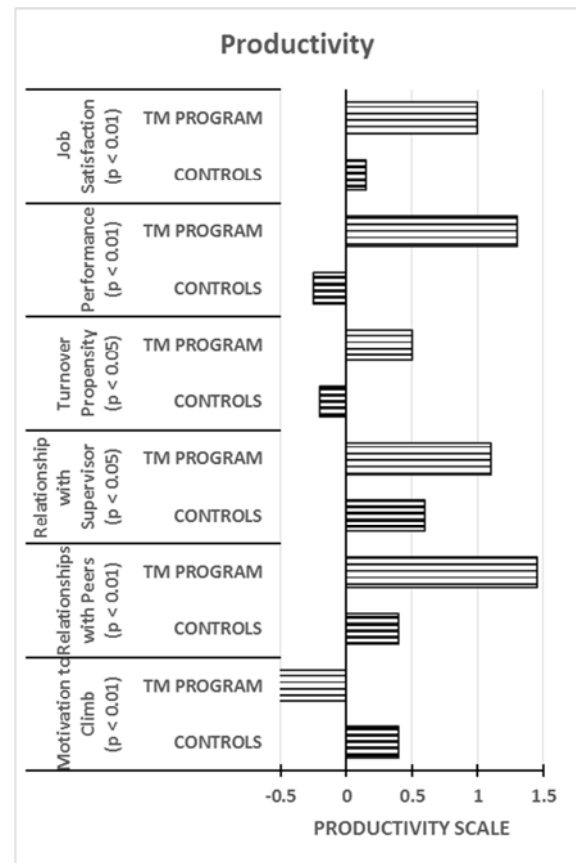


Figure 4. The effect of the Transcendental Meditation program on productivity. A high score indicates increased productivity (Frew, 1974).

Fergusson and Bonshek (2015) have documented Maharishi's views of art and creativity, on how art is a practical application of creative intelligence which can be enhanced through the practice of Transcendental Meditation and the TM-Sidhi program, and discusses such topics as the nature of genius, the ideal of art, art education and training, and the relationship of art and science. Earlier research by Fergusson (1992, 1993) indicated that field-independent behavior in artists, one of the cornerstone capabilities identified by Maharishi in relation to art, is not only associated with artistic achievement but is also higher in meditating art students than non-meditating art students.

7) Transcendence or Religion. Spirituality can be thought of on several levels and from both the theoretical and experiential viewpoints. Because Transcendental Meditation and the TM-Sidhi program is a universal technique and not a religion, that can be practiced by anyone, of any religion, it has been found to enrich the experiences of individuals of all

religions. In Maharishi Vedic Science, transcendence is seen in the context of the field of Transcendental Consciousness, that field of nature's intelligence, available to everyone through the process of transcending during the practice of the Transcendental Meditation program (refer to Section 4 for further explanation).

The enrichment of religious values in Transcendental Meditation practitioners has been measured as a greater respect for traditional religious values (Brown, 1976), a greater satisfaction with one's relationship to God and religion (Nystul & Garde, 1977) and an increased normality of religious orientation (Penner *et al.*, 1974). The experience of transcendental consciousness during the practice of Transcendental Meditation, has been correlated with a combination of inner alertness, respiratory suspension and high EEG coherence (Brown, 1976; Nystul & Garde, 1977; Wallace, 1970).

8) Higher States of Consciousness. As presented above, Maharishi Vedic Science explains that there are seven states of consciousness. Beyond waking, dreaming, and sleeping, there are four higher states of consciousness. The first of these is referred to as Transcendental Consciousness. Wallace's (1970) landmark research was the first to suggest that transcendental consciousness represents a unique state of restful alertness. Oxygen consumption, heart rate, skin resistance, and electroencephalograph measurements were recorded before, during and after subjects practicing the Transcendental Meditation program. The significant changes between the control period and the meditation period in all measurements seemed to distinguish the state produced by Transcendental Meditation from commonly encountered states of consciousness.

More recent studies have shown that periods in which subjects indicate experiencing transcendental consciousness during the practice of Transcendental Meditation are highly correlated with enhanced alpha and theta EEG coherence (suggestive of higher alertness), a stabilisation of EEG coherence outside of the practice of Transcendental Meditation in those that had been practicing Transcendental Meditation for at least eight years (indicating the development of higher states of consciousness over time) and holistic improvements in mental and physical functioning.

These studies include higher EEG alpha coherence and higher creativity (Orme-Johnson & Haynes, 1981), increased frontal alpha EEG activity and periodic theta-alpha bursts, with long-term participants showing higher levels of frontal-central EEG coherence with eyes open, indicating the stabilisation of EEG coherence outside of the practice of Transcendental Meditation (Travis, 1991) and holistic improvements in mental and physical functioning (decreased anxiety, aggression, depression, and introversion; increased self-actualisation; increased capacity for episodes of total attention or absorption; improved performance on measures of creativity and cognitive and perceptual skills; and with increased alpha and theta EEG coherence; and faster H-reflex recovery) (Alexander *et al.*, 1984).

6. Conclusion

This paper presents a possible reconstruction and alternative definition of the fulfilment of human development in the light of Maharishi Vedic Science. Reconstruction is in terms of Maharishi's seven states of consciousness, beyond the normal waking, dreaming and sleeping, there are four higher states of consciousness. The definition of the fulfilment of human development is then seen as living in higher states of consciousness. These are 'higher states' in that each one brings a dynamic expansion of our knowledge and experience, of ourselves and the world around us. As we develop higher states of consciousness, we develop maximum creativity and intelligence based on perfect physiological integration and balance. Consciousness can be seen as nature's intelligence, that intelligence that maintains orderliness throughout all of creation in an evolutionary direction. Gaining higher states of consciousness means gaining increasing support of nature's intelligence, with the ability to naturally live higher states of human development. The paper highlights the unique contribution of Maharishi Vedic Science, and its technologies of consciousness, the Transcendental Meditation and TM-Sidhi program, in that the development of these higher states of consciousness is through contacting and enlivening one's inner self, it does not require anything external.

The fulfilment of human development in higher states of consciousness has been explored in terms of an intellectual understanding of Maharishi Vedic Science and from published scientific research studies. The paper presents the achievement of the qualities of human development with reference to human capabilities, through the concept called the 'Capability Approach'. Six selected dimensions of human capabilities and their functionings are selected to demonstrate the extensive amount of published scientific research findings that show how the practise of Maharishi's Transcendental Meditation and TM-Sidhi program have a positive effect on multiple dimensions of human development. Additional scientific studies are also presented indicating the development of higher states of consciousness through the existence of a unique state of restful alertness, higher EEG coherence and holistic improvements in mental and physical functioning.

The intellectual understanding of Maharishi Vedic Science and the demonstrable benefits of practicing the Transcendental Meditation and TM-Sidhi program tend to support the existence of an underlying *Universal Capability*, accessible by everyone in their own self-sufficient inner awareness, which allows all individuals, of all nations, to naturally and spontaneously develop the full range of human development functionings, leading to the fulfilment of human development in higher states of consciousness in everyday life. Maharishi states that life in these higher states of consciousness is in fact 'normal life'; "Cosmic Consciousness is the state of normal life, and to attain that is to begin to live a normal life." and "When all values of relative life pertaining to the body, mind and surroundings are supplemented with the divine values, the

blissful nature of absolute Being, then the worldly life in fullness of eternal freedom is the normal life of a human being.” (Maharishi, 2001, p 52).

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