

30.6.02

via email: 13 pages

Ayse Iscel <aiscel@dpc.wa.gov.au>; Prof. Peter Newman
<newman@central.murdoch.edu.au>

SUBMISSION TO THE STATE SUSTAINABILITY STRATEGY

Sustainability Policy Unit
Department of the Premier and Cabinet
Government of Western Australia

SUBMISSION: "Ethics, Spirituality and Sustainability
...What is the ethical foundation for planning a more sustainable future?"

1. THE OBJECTIVE

***To provide evidence of massive economic savings to Government, from 5
Spiritual/Ethical Sustainability models, to prompt Government to initiate these 5
models immediately, if not for any other planning reason than economic gain.***

2. THE PROBLEM

**...Economic rationalism irrationally ignores its enduring source
- Spiritual/Ethical foundation**

Economic before social and environmental goals, is UN-sustainable.

***Only after the last tree has been cut down, only after the last fish has been
caught, only after the last river has been poisoned, only then will you realize
that money cannot be eaten.***

~Cree Native American saying

When it is a question of money, everybody is of the same religion. ~Voltaire

Modern **industrialization**, removed natural resources, and converted them to factory toxic waste in the air, water and soil. Working classes were removed from sustenance farming life, to "overcrowded and diseased slums". Sir Francis Bacon, 17th century British Lord Chancellor justified industrialization with his creed: "**Scientific knowledge is technological power over nature**". (1)

And this **industrialization model**, prevails today with **UN-sustainable** consequences.

For example, in **Medical Science**, **Dr Hari Sharma** M.D., Prof Emeritus College of Medicine, Ohio State University, USA (2), demonstrates **failure** of allopathic medicine over disease in the USA, inspite of having one of the most technologically advanced medical systems in the world:

1. High-tech diagnostic methods, sophisticated surgical procedures, and high priced drugs have driven health care costs through the ceiling. The US in 1993 spent almost 14% of GDP on health care – almost US\$2.5 billion per day (3); est . \$4.7 billion 2000; (4)
2. Total mortality rates for most diseases have remained largely unchanged for the past 30 years (5). Life expectancy in the US has increased from 49

years in 1900 to 75 years in 1990, but it is generally agreed that this increase has resulted from improved hygiene, public sanitation improvements, better housing, better nutrition and its associated increase in resistance to disease.. "The development of specific therapeutic interventions has had little impact on overall life expectancy".(6)

3. The US ranks behind most industrialized nations in infant mortality.(4)
4. For life expectancy, USA is 22nd in the world for men, and 16th for women. .(6)
5. Chronic degenerative diseases occur in almost epidemic proportions.(2)
6. 90 million Americans had one or more chronic conditions, accounting for 75% of health care costs (1987);(7)
7. 40%of persons undergoing medical care, experience negative side effects from drugs.(8)
8. **only 15%** of Western medical treatments have a **scientific basis** or have been definitively demonstrated to be **effective**.(9)

3. THE SOLUTION – PROVEN RESULTS

... peer reviewed, empirical EVIDENCE of massive economic outcomes with simultaneous triple bottom line, from 5 Spiritual/Ethical foundation models

Please consider 5 Sustainability models below, with economic outcomes significantly superior to conventional models.

3.1 Medical Model

with peer reviewed, empirical evidence of:

- **86% less hospitalization and surgery**
- **50% less heart disease**
- **50% less disease**
- **anti-oxidant 1,000 times more powerful, than vitamin C or E in fighting free radicals**

The savings to government (available for social and environmental expenditures) would be massive, even at 10% of the health budget.

3.2 Business Model

with peer reviewed, empirical evidence of:

- Increased employee productivity and effectiveness, while reducing stress
- Creation of a common culture and mission within your company
- Improved communication, trust, and collaboration among employees
- Providing superior service to customers
- Empowering organizational leaders

The savings to government and industry for these proven results would be massive.

3.3 Agricultural Model

with peer reviewed, empirical evidence of:

- profitable alternative to conventional agriculture
- fastest growing agricultural sector in the world
- demand outstrips supply over the past two years
- pushes up crop yields on poor farms across the world, often by 70 per cent or more
Requires no pesticides, fertilizers and biotechnology previously thought necessary to produce yields sufficient to meet the world's demand for food on today's available farmland
- Yields equal to and (in years of less-than-optimal growing conditions such as drought), better than conventional systems
- as efficient, economical and financially competitive as conventional methods, as well as better for the soil and the environment.
- higher levels of nutrients when compared with conventional produce

- a significant solution for an array of worldwide concerns such as soil quality, global warming, groundwater pollution, poverty alleviation and the preservation of human health.

The savings to government and industry for these proven results would be massive.

3.4 Crime Rehabilitation Model

with peer reviewed, empirical evidence of:

- recidivism rate 33% lower as measured by return to prison and 47% lower as measured by new conviction rate, compared to random samples from the four other treatment groups, controlling for relevant demographic covariates.
- 35–45% less recidivism from one to five years after parole than closely matched parolees. In contrast, prison education, vocational training, and psychotherapy did not consistently reduce recidivism.
- decreased significantly (as compared to controls) on hostility, state and trait anxiety, insomnia, neuroticism, and behavioral infractions. The experiment was then repeated with a second group of volunteer subjects and yielded similar, significant results.
- decreased significantly on aggression, trait anxiety, psychotic symptoms, and improved significantly on Loewinger's ego development scale

The savings to government and industry for these proven results would be massive.

3.5 Drug Rehabilitation Model

with peer reviewed, empirical evidence of:

- The link between drug abuse and crime is well established. For example, 50% of state prison inmates were under the influence of alcohol or drugs at the time of their offense (Bureau of Justice Statistics, 1993).
- Meta-analysis of 198 studies found this model effects were significantly larger than those produced by standard rehabilitation programs for treatment and prevention of three major classes of chemical abuse—alcohol, cigarettes, and illicit drugs. Abstinence rates for standard rehabilitation programs fall off substantially within three months of completing treatment, with only 25% abstinent at one-year. In contrast, in this model, abstinence rates were maintained or increased over the long-term, with abstinence rates for these substances ranged from 51-89% over a one to two-year period.
- This model's effectiveness in reducing drug dependence has been linked to its reversal of the ravages of chronic stress; ie, chronic stress produces prolonged neuro-chemical imbalances which individuals attempt to balance by ingesting chemicals. Drugs may produce short-term relief from distress, but in the long-term create worse imbalances, distress and drug dependency. Results suggest that this model breaks the dependency cycle by optimizing physiologic homeostasis and psychological well-being, thereby eliminating the need to take drugs.

The savings to government and industry for these proven results would be massive.

4. THE SOLUTION - RESEARCH & RATIONALE

...research evidence and rationale for Spiritual/Ethical foundation

It is no accident that these 5 Sustainability models, have economic outcomes significantly superior to conventional models. They share a common Spiritual/Ethical foundation based in Natural Law, as demonstrated below:

4.1 Medical Model

- **Name:** Maharishi Ayur-Veda ©, and Transcendental Meditation_ TM ©
- **Source:** Dr Sharma has enjoyed a long and distinguished career in the field of medicine and medical research. He is Professor Emeritus at the Ohio State University College of Medicine, where he was Director of Cancer Prevention and

Natural Products Research from 1990 to 1995. He has published more than 100 research papers and has written three books including the best-selling Freedom From Disease.

- **Research:**

STUDY 1: Orme-Johnson D, Psychosomatic Medicine 49 (1987):493-507

Over a 5 year period, this study tracked 2000 people all across the country who practiced TM. The data was collected by an insurance company. The statistics from the TM group were compared to a control group selected by the insurance company to match the TM group for age, education, profession, and other variables.

The overall result was that, compared to the control group, the **TM group went to the hospital 86% less often.**

In the TM group, health utilization was lower in all age groups, but the differences were largest in the older groups - where disease usually manifests most frequently. Moreover, the TM group needed less medical assistance in every category of disease recorded by the insurance company. The statistics also indicated that the reduced usage of medical care was not due to a bias against doctors and hospitals. In fact, there was one category in which the TM group used medical services slightly more than the controls: childbirth. Apparently, the meditators would go to the hospital if they needed to - but their need simply declined.

These statistics were gathered from the insurance company by meditation researcher Dr. David Orme-Johnson. **Was there any flaw** in the research design which could have accounted for such dramatic results? One possible criticism is that it was not a prospective study; it did not measure the subjects before they began TM. In theory, at least, these people may have been extremely healthy before they began TM.

STUDY 2: Herron RE, The Impact of TM on Medical Expenditures, A Dissertation Submitted to the Graduate School of Maharishi Int'l University (August, 1992)

To fill this gap, a Maharishi International University Ph.D. candidate, Robert Herron, undertook another study of insurance statistics. Herron took his data on Canadian citizens and obtained it from the **Canadian government**. Because Canada has a national cradle-to-grave health care coverage, the government has data on every health care expenditure incurred by every citizen. It was possible to trace people's records back years before they learned TM, then look for any changes as they occurred as they learned and continued to meditate.

Herron found that, in the years before they learned TM, the subjects' health care costs averaged the same as for all people in their age range. They were not a self-selected group of outstandingly healthy people. Once they began to meditate, however, their health care costs began to decline - an average of 10% each year.

The results were most dramatic among people who had previously shown the highest pattern of health care costs. The total group was divided into thirds, and in the third which had been to the doctors and hospital most frequently, the practice of TM reduced health care costs by 18% a year - **54% in three years**. Among the elderly, the decline was slightly greater, 19% a year, **57% in three years.** (These declines are inflation adjusted. Since health care costs were rising rapidly each year, the actual cost savings were considerably greater.)

STUDY 3: Orme-Johnson DW, Journal of the Iowa Academy of Science

95(1988): A56 (Abstract). In a third study of insurance statistics, Dr David Orme-Johnson collected insurance data for a seven-year period...a comparative test of the disease-prevention power of Maharishi Ayur Ved as a whole. Over the seven years, comparing the Maharishi Ayur Ved group to all the other Iowans insured by the same company, the Maharishi Ayur Ved group was hospitalized for illness and surgery **86% less.**

STUDY 4: Scientists at The Ohio State University College of Medicine discovered that a two-part **ancient formula** called Maharishi Amrit Kalash, or Amrit Kalash for short, is **1,000 times more powerful, weight for weight, than vitamin C or E in fighting free radicals**; ie, highly unstable molecules that attack your cells and skin and contribute to premature ageing. In the same way, they cause metal to rust and the body to decay. Researchers estimate that each cell in your body is bombarded by more than 10,000 free radicals every day. Free radicals constantly assault your body's natural defences. They are generated by mental and physical stress, toxic chemicals in your water, air and food, smoking, alcohol, x-rays and over-exposure to the sun. **Nutrients called antioxidants help neutralize free radicals. Until now, the best-researched antioxidants were vitamins C and E.** However, **trying to solve the free radical problem with vitamins would take huge, expensive and potentially harmful megadoses.** Amrit Kalash is naturally balanced, and the new research indicates that just **one gram is more effective against freeradicals than 1,000 grams of vitamin C or E.**

- **Rationale:**

1. Dr Sharma quote:

“What is the source of order in physiological functioning, the unseen force that aligns the functioning parts to the system as a whole, giving a specific direction to biological activity, which in turn gives rise to the specific expressions of biological function or structure? A vast, self-organising intelligence, constantly rebuilding, maintaining, and renewing. A grand and detailed blueprint of hierarchical intelligence generates the order and purpose of even the minutest of physiological processes. Without an underlying, integrating intelligence, the exquisite co ordination between the innumerable macro-and micro-level entities of the body would be inconceivable.”
2. Mark Twain quote: **“Nature heals and the doctor sends the bill.”**
 Dr Sharma: The body has a remarkable ability to heal itself. Infact 90 to 95% of the ailments that people consult their physician are self-terminating – they would resolve on their own even if the patient did not seek the doctor's help (10)
3. AyurVeda quote:

Nature has created Man and Woman, as the highest form of life, and as life's guardian. Our survival depends on the fragile balance of nature & living organisms. We must ensure the purity of the water. We must not poison the air. We must not poison the soil. We are interdependent on all other forms of life. To maintain nature's equilibrium, depends on our ability to live in harmony with our external universe, and our ability to live in harmony with our internal universe, ourselves.
4. Ayurveda dates back over 5,000 years; the world's oldest system of traditional medicine still in use; a comprehensive model of health and disease which emphasizes the importance not only of the physiological, but also **psychological, socio-ecological, and spiritual factors in the development of illness**; as opposed to the **90% crisis management of today's allopathic medicine**
5. Focus of this **comprehensive system of natural health**, is on the underlying **wholeness of existence** and the structuring dynamics of **intelligence** that give rise to the human physiology. Disease is viewed as a breakdown in the delicate balance of the coordinating intelligence that rules the functioning of the body. This breakdown occurs on a level deeper than organs, tissues, or cells – it results from the **disconnection of intelligence from its source or wholeness**. This concept of wholeness derives from the Vedic tradition and parallels **modern physics'** discovery of the **unified source of reality beyond the subatomic level**. The **in-substantial nature of material creation** – as identified by both Vedic science 5,000 years ago, and modern physics – cannot be ignored if we are to have a complete model of the human body and the nature of health and disease.

6. Evidences of the **placebo** effect, **spontaneous remissions**, and the uncanny **plasticity** of living systems are difficult to account for in the **Cartesian/Reductionist/Mechanistic** model of the body which leaves little room for the notion of an **inherent biological intelligence**.
7. The phenomenon of **emergence (wholistic functioning systems whose properties are different from its constituent parts**;eg, emergent properties of water are liquid, frozen, boiling, but always the same H and O atoms), is one of the most pervasive characteristics of organization in living systems, and questions **Darwin's** belief that small hereditary changes, gradually tinkered together through the process of **natural selection**, add up to large scale differences we observe between species. (11)
8. The common feature of the various **manifestations of the body's intelligence** is that they are **holistic** responses in which the body functions as a **precisely coordinated system**. In the same way, at the **quantum level, mind, or subjectivity**, is pivotal, in that specific expression of the '**observed**' **cannot be separated from the observer**.
9. **Western science**, which **presumes matter is primary** and all living systems emerge from **random interaction** of molecules, has turned out to be too narrow to accommodate **nature's plethora or marvels**.
The basic postulates of the materials, mechanistic paradigm are assumptions about the nature of reality, not assertions firmly based upon experimental data.

4.2 Business Model

- **Name:** FranklinCovey Solutions™
- **Source:** Dr Stephen Covey (12)
- **Research:**
 1. Dr Covey has topped the bestseller list for 7 years and tied as #1 Most Influential Business Book of the 20th century; **10 million copies** sold, in **28 languages in 70 countries**. **Time** magazine recognized him as one of the **25 most influential Americans**. His corporation consults over **300 of the Fortune 500** companies.
 2. **CEO, US Public Broadcasting Service:** "The ethical basis for human relations in (Covey's) book defines a way of life, not just a methodology for succeeding at business. That it *works* is apparent."
 3. **Editor Harvard Business review:** "...Covey provides an empowering philosophy for life that is also the best guarantee of success in business...a perfect blend of wisdom, compassion and practical experience."
 4. **US Senator Jake Garn:** "We would do well to make the reading and use of this book a requirement for anyone at any level of public service. It would be far more effective than any legislation regarding *ethical conduct*."
 5. **CEO, Chairman, President Sears, Robuck:** "(Covey's book) are keys to success for people in all walks of life."
 6. **US Senator Orrin Hatch:** "I know of no one who has contributed more to helping *leaders* (USA) than Stephen Covey."
 7. **US Ambassador to Sweden:** "Covey's deliberate *integration of life and principles* leads to *squaring inner thought and outward behaviour*, resulting in *personal as well as public integrity*."
 8. **Founder Success Magazine (USA):** "The conclusions he draws in this book underscore the *need to restore the character ethic in our society*,"
 9. Case Study: **Federal Express Embracing Change and Improving Customer Service**; refer to http://www.franklincovey.com/about/investor/stories/fedex_cs.html
 10. Case Study: **Blockbuster Inc. Increased Productivity Amid Explosive Growth**; refer to http://www.franklincovey.com/about/investor/stories/blockbuster_cs.html
- **Rationale:**

1. Dr Covey has taught (for more than 30 years) , millions of individuals, families, and leaders in business, education, and government the transforming power of **principles or natural laws**, that govern human and organizational effectiveness; the internalization of **correct principles** upon which **enduring** happiness and success are based.
2. Principles are natural laws which cannot be broken; Cecil B deMille's observed principles in his movie "The Ten Commandments"...**"It is impossible for us to break the law. We can only break ourselves against the law."**
3. **THE PRINCIPLE-CENTRED PARADIGM**
 - Dr Covey studied 150 years of **Character Ethic** literature as the foundation of success – things like **integrity, humility, fidelity, temperance, courage, justice, patience, industry, simplicity, modesty and the Golden Rule**. Benjamin Franklin's autobiography is representative of that literature; the story of one man's effort to **integrate certain principles and habits deep within his nature**.
 - Post World War I, the basic view of success shifted from **Character Ethic** to **Personality Ethic**; ie. *success* became more a function of *personality, of public image, of attitudes and behaviours, skills and techniques, that lubricate the processes of human interaction*. But it is **character which communicates most eloquently; what we are communicates far more eloquently than anything we say or do**. **We all know it**. There are people we trust absolutely because we know their character. Whether they are eloquent or not, whether they have human relations techniques, or not, we trust them, and we work successfully with them.
 - **"The Character Ethic is based on the fundamental idea that there are principles that govern human effectiveness – natural laws in the human dimension that are just as real, just as unchanging...as laws such as gravity. The "object reality" is composed of principles that govern human growth and happiness – natural laws that are woven into the fabric of every civilized society throughout history and compromise the roots of every family and institution that has endured and prospered."**
 - **"The reality of such principles or natural laws surface time and time again, and the degree to which people in a society recognize and live in harmony with them moves them to either survival and stability or disintegration and destruction."**
 - **"These principles are not esoteric, mysterious, or "religious" ideas. There is not one principle taught in this book that is unique to any specific faith or religion, including my own."**
 - **These principles are a part of most every major enduring religion, as well as enduring social philosophies and ethical systems.** They are self-evident and can easily be validated by any individual. It's almost as if these **principles or natural laws** are part of the **human condition**, part of the **human consciousness**, part of the **human conscience**. They seem to exist in all human beings, regardless of social conditioning or loyalty to them.
 - For example, the principle of **fairness**, out of which our whole concept of **equity and justice** is developed. Little children seem to have an **innate sense** of the idea of fairness, even apart from opposite conditioning experiences. **There are vast differences how fairness is defined and achieved, but there is almost universal awareness of the idea**. Other principles include **integrity, honesty, human dignity, service, quality, excellence, potential, growth, patience, nurturance and encouragement**.
 - **Principles are not practices**. A practice is a specific action which works in one circumstance but not necessarily in another. **While practices are situation specific, principles are deep, fundamental truths that have universal application**. They apply to individuals, to marriages, to families, to private and public organizations of every kind. **When these truths are**

internalized into habits, they empower people to create a wide variety of practices to deal with different situations.

- **Principles are not values.** A gang of thieves can share values but they are in violation of fundamental principles.
- **Principles are guidelines for human conduct that are proven to have enduring, permanent value.** They are unarguable because they are **self-evident**; consider the absurdity of living an effective life based on their **opposites** – unfairness, deceit, baseness, uselessness, mediocrity or degeneration, as a solid foundation for lasting happiness and success.
- **The closer our maps or paradigms are aligned with these principles or natural laws, the more accurate and functional they will be.**

4.3 Agricultural Model

- **Name:** Organic
- **Source:** various

- **Research**

1. **Nutrition:** funded by the United Kingdom's Soil Association (the largest organic farmer organization in the UK) and reported at the Association's January 8, 2002 conference. These findings on the health content of organic food contrast with research indicating that industrial agricultural practices may be having a detrimental effect on the nutritional value of conventional produce. (Detailed in Organic View v.1 n.17, found at <http://www.purefood.org/organicview.htm>) Those findings included:
 - § In an analysis of USDA nutrient data from 1975 to 1997, the Kushi Institute of Becket, Massachusetts found that the average calcium levels in 12 fresh vegetables declined 27 percent; iron levels dropped 37 percent; vitamin A levels 21 percent, and vitamin C levels 30 percent.
 - § A similar analysis of British nutrient data from 1930 to 1980 published in the British Food Journal found that in 20 vegetables, the average calcium content had declined 19 percent; iron 22 percent; and potassium 14 percent.
 - § A 1999 study out of the University of Wisconsin found that three decades of the overuse of nitrogen in US farming has destroyed much of the soil's fertility, causing it to age the equivalent of 5,000 years.
 - § A new US Geological Survey report indicates that acid rain is depleting soil calcium levels in at least 10 eastern states, interfering with forest growth and weakening trees' resistance to insects.
2. **Yield, profit & 'worldwide concerns':** funded by The Rodale Institute, a nonprofit organization, and in cooperation with the **U.S. Department of Agriculture-Agricultural Research Service**, the **Farming Systems Trial** experiment covers 12 acres and compares highly productive, intensive corn/soybean systems under conventional and organic management
3. **Unprecedented growth:** According to the 1999 **Organic Food and Farming Report, launched at the Royal Society of Medicine, London**, on 11 October 1999, there has been unprecedented growth in the consumption of organic food in Britain. The Soil Association's Agriculture Development Director, Simon Brenman, spoke of this growing phenomena:
 - § *'Organic food and farming has struck a chord with the public and there is now an unprecedented level of demand which is currently not being met by UK producers. We are importing 70% of all organic food sold in the UK. The Government needs to respond to public opinion and recognise that the development of sustainable agriculture cannot be left to market forces alone. The Soil Association is therefore calling for genuine commitment and significantly increased support for organic farming. We are challenging the Government to set a*

target of achieving 30 per cent organic production in the UK by the year 2010.'

§ A **MORI Poll** showed that in the UK one third of the public had bought organic food within a 3-month period in the fall of 1999. This surge in demand for organic food has specifically affected the baby foods sector. The Soil Association's Agriculture Development Director went on to say: '*The extraordinary rise in demand for organic food is particularly evident in baby foods, where a staggering one fifth of all products now sold are organic, with one third of all babies eating some organic food in the first year of their lives. Leading the challenge to satisfy this unprecedented demand is Organix Brands PLC. Founded in 1992, the company grew 49% in 1998 alone, selling seven million jars of food.*'

4. **Healthier, Tastier, and More Nutritious** There is growing evidence that organic food not only tastes better but is also more nutritious than conventionally produced food. A **November 2000 article in Acres USA, 'Nutritional Quality: Organic Food Versus Conventional'**, reports on a research study in the **Journal of Applied Nutrition** that contrasts the chemistry of conventional food to organic:

§ '*On a per-weight basis over a two-year period, average levels of **essential minerals were much higher** in the organically grown apples, pears, potatoes, and corn as compared to conventionally produced products. The organically grown food averaged higher in calcium, chromium, iron, magnesium, molybdenum, phosphorus, potassium, and zinc, and lower in mercury and aluminium. A more recent study in Australia showed a similar difference between calcium and magnesium levels in organic and non-organic food.*'

§ The article cites the research (among others) of Dr Franco Weibel of the **Research Institute of Organic Agriculture in Switzerland**, who compared a variety of parameters in apples grown under organic and conventional conditions, such as **mineral elements**, sugars, phenols, malic acid, selenium, dietary fibre, and vitamins C and E. Weibel found that organic fruit had significantly **firmer flesh** and **better sensory taste** evaluations. He also found interesting correlations between the **microbial activity** in the soil, a condition closely associated with organic management, and the **nutritional status** of the apples, especially the phosphorous level. He also found that organic fruit was considerably higher in phenols. The article explains:

*'Plants naturally synthesize phenols for defence against pests and diseases. Possibly, the **unsprayed** organic plants were stimulated to make higher levels of these critical molecules in response to pest attack. These phenolic compounds that protect the plant also have been shown to be **disease protectants** in humans.'*

- **Rationale:**

1. The life of a farmer is intimately connected with the **rhythms and cycles of Nature**. Every farmer experiences that good fortune—e.g. good weather, or the absence of pests and diseases—is the essential requirement for a successful crop, season after season. In other words, **every farmer needs the benevolence of Nature—the support of Natural Law—in order to be successful**.
2. **Organic agriculture** is a term used to include all systems of agriculture that support the healthy and life supporting production of food through environmentally and socially sound production methods. It adheres to **globally accepted life supporting principles**, which are implemented in the local economic, geo-climatic, and cultural settings.
3. Organic farming promotes health in the farmer, the food, and the environment. It uses methods that **respect and uphold the natural capacity of plants, animals, and the landscape**.

4.4 Crime Rehabilitation Model

- **Name:** The Enlightened Sentencing Project TESP™; Transcendental Meditation TM©
- **Source:** Maharishi Mahesh Yogi
- **Research**
 1. **Psychophysiological correlates.** Numerous experiments indicate that TM produces a distinctive state of **restful alertness**, a proposed **fourth major state of consciousness** that can be distinguished from the ordinary states of waking, dreaming, and sleep on over 20 psycho-physiological parameters ([Alexander et al., 1987](#)). Deep physiologic rest during TM (relative to eyes closed rest) is shown by significant decreases in respiration, minute ventilation, blood lactate, and skin conductance ([Jevning, Wallace, & Beidebach, 1992](#)). This profound rest is predicted to **normalize deep-rooted stresses associated with antisocial behavior** ([Maharishi, 1969](#)).
 2. Simultaneous enhanced alertness during TM is suggested by increased alpha/theta EEG power and coherence, plasma arginine vasopressin, and faster H-reflex recovery (e.g., [Badawi et al., 1984](#)). Elevated EEG coherence during TM significantly correlates with several parameters that have been associated with positive rehabilitation, including **higher moral reasoning, fluid intelligence, grade point average, concept learning, creativity, and decreased neuroticism** (e.g., [Orme-Johnson & Haynes, 1981](#)).
 3. It has been predicted ([Maharishi, 1963](#)) that **chronic psychosocial stress weakens mechanisms of physiological adaptation, thus undermining a person's well-being and ability to cope with a changing environment**. As a result, propensity towards antisocial means to satisfy desires increases.
 4. Several studies have shown that TM **reduces stress-related biochemical and general physiological imbalances associated with criminal behavior**. TM participants (including prisoners and **Vietnam veterans** with post-traumatic stress disorder) physiologically habituate more quickly to a series of stressful stimuli and display a more stable autonomic response to stressors than matched controls ([Brooks & Scarano, 1985](#); [Orme-Johnson, 1973](#)).
 5. Also, the TM program has been shown to **decrease basal cortisol** (a stress-related hormone) and **increase serotonin** availability and turn-over during the practice and over the long-term. This is relevant because research has demonstrated a relationship between **low serotonin, high basal cortisol, and impulsive aggression among violent criminal offenders** ([Lidberg et al., 1985](#)), and individuals with **aggressive personalities** ([Brown et al., 1982](#)).
 6. **Distinguishing TM from relaxation.** Do relaxation and meditation techniques differ in their effectiveness in producing such positive outcomes? Several recent **statistical meta-analyses**, which quantitatively summarize the results of hundreds of studies address this question. The TM technique was found to:
 - **reduce several indicators of physiological arousal** both during and after the practice compared to relaxing with eyes closed ([Dillbeck & Orme-Johnson, 1987](#))
 - **decrease chronic anxiety** more than other forms of stylized relaxation and meditation ([Eppley, Abrams, & Shear, 1989](#))
 - **enhance positive mental health** as operationalized by measures of self-actualization compared to other relaxation/meditation practices ([Alexander, Rainforth, & Gelderloos, 1991](#)).
 - In these meta-analyses, when such factors as strength of experimental design, researcher bias, expectancy and treatment length were controlled statistically, **significant differences between groups were still sustained**.
 7. In addition to TESP in St. Louis, Missouri, USA, the TM program has been taught to more than **fifty thousand prison inmates in over one hundred penal institutions around the world; nearly thirty thousand police and correctional officers** have also learned this technique for self-development.
 8. The TM technique was brought to the West by **Maharishi Mahesh Yogi in 1958**. Since that time, **four million people worldwide** have learned it, and more than

six hundred scientific studies on the TM technique have been conducted at **over two hundred universities** and research institutes around the world, **including fifteen studies in U.S. prisons.**

9. **References**

- [http://enlightenedsentencing.org/summary-of-scientific-research.htm#Alexander,%20C.N.%20\(1982\).](http://enlightenedsentencing.org/summary-of-scientific-research.htm#Alexander,%20C.N.%20(1982).)
- Scientific Research on the Transcendental Meditation (TM) and TM Sidhi programs http://www.mum.edu/tm_research/summary_tm_res.html
- Scientific Charts of Research on the Transcendental Meditation (TM) and TM Sidhi programs: <http://www.tm.org/research/summary.html>
- Scientific Charts of Research on the Transcendental Meditation (TM) and TM Sidhi programs: <http://www.maharishi.org/mau/index.html>
- TM Australia: : <http://www.tmprogram.com.au>

- **Rationale:**

1. **Transcendental Meditation TM** - The TM program is a simple, natural, mental technique practiced for twenty minutes morning and evening with eyes closed. It involves **no change in life-style or beliefs**; it is **not a religion or philosophy**; and it has no educational prerequisites. Research indicates that a **distinctive psycho-physiological state of restful alertness** occurs during the practice which **alleviates stress and enhances psychosocial development**.
2. In contrast to more externally oriented approaches to modifying attitudes and behavior, TM appears to promote this wide range of rehabilitative changes through an **inner process of psycho-physiological transformation**
3. Vedic Science is **not** based on any system of reasoning, but on a level of life that anyone can experience by taking the **awareness deep within the mind**. **The experience of TM is of a level beyond sensation, thought, feeling – a universal, invariant field of pure consciousness, the fundamental level of awareness, the Self. Within this field one experiences the blueprint of Nature, a lively, universal, impersonal intelligence, called universal Natural Law. But Maharishi does not derive universal moral norms from universal Natural Law. His principle is that everyone has the innate ability to think and act from the level of pure consciousness and in accord with Natural Law.**

“Every man (woman) has a tremendous amount of energy and potentiality latent in him, and every man (woman) has the ability to tap this great treasure within himself (herself). With such a natural gift, there is no reason for man (woman) to suffer in any way. Suffering is only due to ignorance of how to discover his (her) inner potentialities and use them with advantage in daily life. All human suffering could be eliminated by educating man (woman) in the art of unfolding his own inner consciousness and helping him to realize his own real nature, free from shortcomings. ~ Maharishi Mahesh Yogi

4. Vedic Science demonstrates in personal experience, that when one connects to one’s inner potentialities, then spontaneously right action arises.

Established in Being, perform action. ~ Maharishi Mahesh Yogi

4.5 Drug Rehabilitation Model

- **Name:** Transcendental Meditation TM©
- **Source:** Maharishi Mahesh Yogi

- **Research & Rationale**

1. Drugs may produce short-term relief from distress, but in the long-term create worse imbalances, distress and drug dependency. They suggest that TM breaks

the dependency cycle by optimizing physiologic homeostasis and psychological well-being, thereby eliminating the need to take drugs.

2. Walton, K.G. & Levitsky, D. (1994). A neuroendocrine mechanism for the reduction of drug use and addictions by Transcendental Meditation. *Alcoholism Treatment Quarterly*, 11(1), 89–117.
4. Gelderloos P., Walton, K.G., Orme-Johnson, D.W., & Alexander, C.N. (1991). Effectiveness of the Transcendental Meditation program in preventing and treating substance misuse: A review. *International Journal of the Addictions*, 26, 293–325.
5. Alexander, C.N., Robinson, P., & Rainforth, M.V. (1994). Treating and preventing alcohol, nicotine, and drug abuse through Transcendental Meditation: A review and statistical meta-analysis. *Alcoholism Treatment Quarterly* 11(1), 13–87.
6. **Further Research:** refer **Crime Rehabilitation Model**
7. **Further References:** refer **Crime Rehabilitation Model**

5. REFERENCES

1. S.Croal & W.Rankin, Environmental Politics, Allen & Unwin Australia, 2000
2. Hari Sharma, Awakening Nature's Healing Intelligence, Lotus Press, USA, 1997
3. National Centre for Health Statistics (1995). Health United States, 1994. Hyattsville, MD: Public Health Service. DHHS Pub. No. (PHS) 95-1232. p.6.
4. *ibid.*
5. Institute of Noetic Sciences with William Poole, (1993). The Heart of Healing. Atlanta: Turner Publishing.
6. Sarafino, Health Psychology: Biopsychosocial Interactions NY Wiley. P 5-7 (1990)
7. Hoffman, C., Rice, D., and Sung, H.-Y. (1996). Persons with chronic conditions. Their prevalence and costs. Journal of the American Medical Association, 276(18): 1473-1479
8. Weitz, M. (1982), Health Shock. Eaglewood Cliffs, NJ: Prentice-Hall.p.v.
9. Smith R 1991, "Where is the wisdom? The poverty of medical evidence." *British Medical Journal* 303:798-799
10. Dubos, R. (1990). Self Healing: A Personal History. In: Ornstein, R. and Swencionis, C. (eds). The Healing Brain, NY: Guilford Press
11. Hoyle, F. (1983), The Intelligent Universe. NY: Holt, Rinehart and Winston.
12. Stephen Covey, The 7 Habits of Highly Effective People, (1990) Simon & Schuster