

Theory and Research on Conflict Resolution Through the Maharishi Effect

David W. Orme-Johnson

Maharishi International University
Fairfield, Iowa, U.S.A.

Abstract

Maharishi Mahesh Yogi approaches peace from collective consciousness, the holistic level of society where all its component parts are integrated. Collective consciousness arises from the consciousness of all individuals in society and reciprocally influences each individual's consciousness and behavior. The basis of all levels of individual and collective consciousness is transcendental consciousness, which the individual can directly experience as the unified field of nature's intelligence and infinite organizing power. Extensive, well-controlled research demonstrates that the square root of 1% of a population experiencing transcendental consciousness through Maharishi's Transcendental Meditation and TM-Sidhi program propagates coherence in collective consciousness, thereby resolving conflict and improving the quality of life. This phenomenon is known as the Maharishi Effect.

The Theory of the Maharishi Effect

Modern physics has discovered that nature is fundamentally composed of quantum fields that mediate action at a distance and at the basis of all fields is the unified field of natural law (Hagelin, 1987, 1990, please refer to Hagelin's article in this issue). Maharishi Mahesh Yogi has brought to light the Vedic understanding that the unified field is a fundamental level of consciousness, transcendental consciousness, at the basis of each individual's mind. In Maharishi's view, direct experience of transcendental consciousness is an experience of the unified field of nature's intelligence, which has testable consequences of propagation and influences of coherence throughout society. Extensive research, to be reviewed below, has demonstrated that when individuals experience transcendental consciousness through the Transcendental Meditation and TM-Sidhi program, conflicts decrease and cooperation increases within society and between nations, a phenomenon that scientists have named the *Maharishi Effect*.

Address correspondence to: Department of Psychology
Maharishi International University, 1000 North Fourth Street, DB 1118, Fairfield, IA 52557-1118
Modern Science and Vedic Science, Volume 5, Numbers 1-2, 1992, Special Issue
Proceedings of Approaches to Creating a Stable World Peace, April 5-7, 1991
Sponsored by the Institute of World Peace
Maharishi International University
©1992 Maharishi International University

Although action-at-a-distance phenomena have not been reliably observed within contemporary social research, they are now well accepted in the natural sciences. Gravity and the transmission of radio and television signals are both examples of action at a distance that have become familiar to us today. To understand these phenomena, physics developed the concept of abstract quantum fields that mediate these effects. The basic understanding given by quantum theory is that all of creation is the expression of fluctuations of underlying universal fields, and all bodies and processes are therefore connected at fundamental levels. (Hagelin, 1987, 1989, please refer to Hagelin's article in this issue.)

Collective Consciousness in the Social Sciences

It bears keeping in mind that while contemporary social theory views human beings "classically" as ontologically separate individuals, the longest tradition of philosophical thought in the West—the idealist tradition—has maintained, at least implicitly, the connection of human beings on the level of consciousness. It is also the case that several of the founding fathers of modern psychology proposed the concept of consciousness as a field through which individuals may be fundamentally connected. Gustav Fechner, the originator of psychophysics, for example, described a unity or continuity of "general consciousness" underlying the discontinuities of consciousness associated with each individual, accessible in principle simply through lowering the threshold of conscious experience (James, 1898/1977).

William James (1898/1977), the patriarch of psychology as an academic discipline in America, suggested that the brain may serve to reflect or transmit, rather than produce, consciousness, which may be conceived as a transcendental, infinite continuity underlying the phenomenal world. Emile Durkheim, who is considered one of the chief architects of modern sociology, proposed that a *conscience collective* was the essence of the underlying social fabric unifying individuals in society. This "collective conscience" or "collective consciousness" was described by Durkheim (1951) as the mind of society, created when "the consciousness of the individuals, instead of remaining isolated, becomes grouped and combined" (pp. 310, 312, 313).

Collective Consciousness in the Physical Sciences

In the twentieth century, a number of the creators of modern physics were propelled by the implications of their discoveries into what might be described as a field theory of consciousness. Sir Arthur Eddington (1984), who provided empirical confirmation of Einstein's General Theory of Relativity, wrote, "The idea of a universal Mind or Logos would be, I think, a fairly plausible inference from the present state of scientific theory; at least it is in harmony with it" (p. 206; Dossey, 1989, p. 125).

The eminent astronomer, mathematician, and author Sir James Jeans (1943) wrote:

When we view ourselves in space and time, our consciousnesses are obviously the separate individuals of a particle-picture, but when we pass beyond space and time, they may perhaps form ingredients of a single continuous stream of life. As it is with light and electricity, so may it be with life; the phenomena may be individuals carrying on separate existences in space and time, while in the deeper reality beyond space and time we may all be members of one body. (p. 204; Dossey, 1989, p. 125)

Quantum field theory gives consciousness an ontologically fundamental position. As the French physicist Bernard D'Espagnat (1979) commented in a *Scientific American* article, "The doctrine that the world is made up of objects whose existence is independent of human consciousness turns out to be in conflict with quantum mechanics and with the facts established by experiment" (p. 158). Max Planck, the father of quantum theory, more directly said, "I regard consciousness as fundamental. I regard matter as derivative from consciousness" (quoted in Klein, 1984). John Hagelin (1987, 1989), one of the architects of unified field theory, has gone the furthest of any physicist in providing a conceptual link between the most recent advances in unified field theory and the precise descriptions of the unified field of consciousness found in the Vedic tradition of India, from which Maharishi has brought to light this approach to world peace.

Maharishi's Principles of Collective Consciousness

The key to Maharishi's approach to creating world peace is collective consciousness (Maharishi Mahesh Yogi, 1986a, 1986b). Each level of social organization is said to have an associated collective consciousness. For example, one clearly experiences the contrast between two different collective consciousnesses when crossing a national border. Individual consciousness is said to be the basic unit of collective consciousness, influencing collective consciousness and being in turn influenced by it (Maharishi Mahesh Yogi, 1976, p. 124). Maharishi states:

Just as the consciousness of an individual determines the quality of his thought and behavior, so also there exists another type of consciousness for society as a whole: a *collective* consciousness for each family, city, state, or nation, having its own reality and the possibility of growth. The quality of collective consciousness of a society is a direct and sensitive reflection of the level of consciousness of its individual members. (p. 91)

Stressed individuals create stress in collective consciousness, which in turn influences everyone else in society. A palpable influence of stressed collective consciousness is experienced, for example, in a tense office, an unhappy home, or a crime-ridden city. When stress predominates in collective consciousness, behavior automatically becomes cautious and defensive. The turbulence created in the mind of an individual by the anxiety, anger, and dullness in the collective consciousness obscures the fine level of feelings and creative intuition. Consequently, social relations become coarse and creativity inhibited. On the other hand, a harmonious office, happy home, or peaceful city provides a soothing atmosphere that is conducive to trust, cooperation, and creative expression. In Maharishi's view, all of the different problems in society are expressions of stress throughout the system as a whole, i.e., in its collective consciousness. Maharishi (1979) states:

All occurrences of violence, negativity and conflict, crises, or problems in any society are just the expression of growth of stress in collective consciousness. When the level of stress becomes sufficiently great, it bursts out into large-scale violence, war, and civil uprising necessitating military action. (p. 38)

Maharishi (1986a) further explains that terrorism is also an expression of stress in collective consciousness.

Whatever may seem to be the cause of the outbursts of terrorism, whatever little excuses there are, these excuses arise on the surface of the human race only from the stress in world consciousness, and stress is not seen until it bursts out. (pp. 83)

If stress in the collective consciousness is the cause of war and terrorism, then neutralizing the stress in the whole society in one operation would be an ideal means to create peace. Maharishi (1986a) goes on to identify the source of stress as violation of natural law.

The basis of stress in world consciousness is the violation of natural law by the people. The basis of the violation of natural law is the fact that the educational systems do not educate the people to spontaneously think and act according to natural law. (pp. 83–84)

Violation of natural law means that thoughts and actions are disconnected from their unifying source, the unified field of nature's intelligence, and thus are damaging to the well-being of others in society. A few individuals educated to experience the unified field, transcendental consciousness, create coherence in collective consciousness, thus bringing the entire society into accordance with natural law.

The difficulty with achieving peace by any other means (unaided by creating coherence in collective consciousness) is that peace, like war, must be systemic. War has many complex determinants—economic, political, historical, individual, ethnic—that must all be addressed simultaneously if peace is to become a stable reality. The beauty of Maharishi's approach to peace is that it deals with the whole system at once through its collective consciousness, because collective consciousness touches every aspect, every phase, and every level of life in society.

Maharishi's Technology to Create Coherence in Collective Consciousness

How is it possible to have a holistic, beneficial influence on collective consciousness? The unified field of nature's intelligence can be systematically experienced through the Transcendental Meditation and TM-Sidhi program.¹ This experience enlivens natural law and purifies collective consciousness, thus nipping violence in the bud while at the same time creating an atmosphere in which an ideal society would spontaneously emerge. It also raises individual consciousness, and meditators, becoming less stressed and more coherent in their own thought and action, generate an influence of coherence in collective consciousness. Further, the theory holds that only a small proportion of people experiencing the unified field of natural law are needed to neutralize stress in collective consciousness, because coherence is more powerful than incoherence.

Implicit in this view are a number of principles that need to be made explicit regarding the nature of the human mind, the nature of natural law, and the relationship

¹ Whereas the Transcendental Meditation technique provides the experience of transcendental consciousness, the TM-Sidhi program allows the mind to function from that level. Research has shown that the TM-Sidhi program is more powerful than the Transcendental Meditation technique alone in terms of its psychological and physiological benefits for the individual and its ability to create coherence in society at large (please refer to Orme-Johnson & Farrow, 1977; Chalmers, Clements, Schenkluhn, & Weinless, 1989a, 1989b, 1991; Wallace, Orme-Johnson, & Dillbeck, in press). This leads to the prediction that fewer TM-Sidhi program participants are needed to produce the effects. In addition, group practice of the Transcendental Meditation and TM-Sidhi program has been found to potentiate the effect.

between the mind and natural law at their fundamental levels.

Transcendental Consciousness at the basis of the mind. The first principle is that individual consciousness is structured in layers from gross to subtle, from sensory and cognitive processes to finer processes of intellect and feeling, to the sense of self (ego), to the subtlest level which is the abstract, transcendental consciousness, the basis of all processes of the mind (Maharishi Mahesh Yogi, 1972, p. 19-4). Whereas the more expressed levels of the mind are familiar to psychologists and lay persons, transcendental consciousness is less commonly appreciated and needs some explanation. It is called “transcendental” consciousness because it is “beyond” or transcendental to all other levels of the mind. It is also called “pure” consciousness because it is consciousness in its essential nature. By analogy, pure consciousness can be likened to an ocean and mental activity to the waves on the ocean. When the localized waves settle down, the unbounded ocean (transcendental consciousness) is experienced. Transcendental consciousness is also called the Self, large “S”, because it is the universal Self within every person, in contrast to the self, small “s” which is a person’s unique individuality. Pure consciousness is the knower/observer/experiencer within each of us.

Maharishi has brought to light this understanding about the structure of the mind with transcendental consciousness at its basis, which is described in many branches of the Vedic literature, for example in the Bhagavad-Gita, Upanishads, and the Upa-Ang (Maharishi Mahesh Yogi, 1967; Dillbeck, 1988). Moreover, this hierarchical structure of levels of the mind has recently gained recognition in modern psychology. For example, this structure is able to explain the sequence of human cognitive development from sensorimotor processes to logical reasoning to higher states of consciousness as the development from outer to inner levels of the mind (Alexander et al., 1990).

Experiencing transcendental consciousness. Thus the first principle of Maharishi’s theory of world peace is that transcendental consciousness exists at the basis of the mind. The second is that it can be experienced. Transcendental consciousness ordinarily remains hidden or transcendental to conscious experience because the conscious experiencing mind is *object-referral*, meaning that the observer, which is transcendental consciousness, is looking outward onto the objects of the sensory world and in observing them, does not observe itself, just as we do not observe our glasses when looking through them. Even during introspection, in which the mind is exploring its own contents and operations, consciousness does not observe its own essential nature as transcendental consciousness, because it is observing contents and operations, that is, thoughts, feelings, discriminative processes, and other denizens of subjective life. Introspection is caught in the waves of consciousness and does not fathom the ocean of consciousness.

The endless and bewildering array of conscious activities observed during introspection is the reason that understanding consciousness is generally held to be the most difficult problem in nature (Miller, 1992). During introspection, the mind still has a tripartite division of the observer observing the observed, or said another way, it is divided into knower, known, and processes of knowing which connect the two, the observed or known being the mind’s own activities and contents. Therefore it is *in principle* impossible for the thinking mind to experience transcendental consciousness. A technique is needed in order for transcendental consciousness to transcend its activities and become

self-referral, the knower knowing itself rather than being object-referral, in which the knower knows something outside of itself.

Maharishi (1967) explains that transcendental consciousness is a state of bliss, and that the Transcendental Meditation technique gives the mind an inward direction toward bliss, which takes the mind from an *object-referral state* to a *self-referral state*.

When the mind moves towards bliss, it experiences increasing charm at every step; as when one proceeds towards the light, the intensity increases continuously. When the mind experiences increasing happiness, then it does not wander; it remains focused in one direction, unwavering and resolute. Such is the state of the mind moving in the direction of bliss, and when it arrives at the direct experience of bliss, it loses all contact with the outside and is contented in the state of transcendental bliss-consciousness. (p.121)

Maharishi (1986a) further describes the self-referral state of transcendental consciousness this way:

The awareness is open to itself, and therefore the awareness knows itself. Because awareness knows itself it is the knower, it is the known, and it is the process of knowing. This is the state of pure intelligence, wide-awake in its own nature and completely self-referral. This is pure consciousness, transcendental consciousness. (p. 29)

Maharishi (1986a) explains that experience of self-referral consciousness by assemblies of practitioners of the Transcendental Meditation and TM-Sidhi program creates field effects of coherence in collective consciousness.

When consciousness is flowing out into the field of thoughts and activity, it identifies itself with many things [object-referral], and this is how experience takes place. Consciousness coming back onto itself gains an integrated state, because consciousness in itself is completely integrated. This is pure consciousness, or transcendental consciousness [self-referral]. From this basic level of life emerge all fields of existence, all kinds of intelligence. This self-sufficient, self-referral state of consciousness is the basis of the phenomenon of coherence that radiates from such assemblies and influences the whole world consciousness. (p. 25)

Coherence means coordinated activity: the functions and structures of every part of a system perfectly reinforce the whole, and the whole supports all the parts. With respect to the individual, coherence means physiological, psychological, and sociological integration producing health, happiness, and right action, as research on individuals practicing the Transcendental Meditation program has shown (Please refer to Alexander's article in this issue). Because collective consciousness arises from the individuals in society, when individuals throughout society become more coherent due to the enlivenment of natural law by groups practicing the Transcendental Meditation and TM-Sidhi program, so does collective consciousness, and through this influence, society as a whole becomes peaceful.

The purpose of natural law. Given that the basis of natural law is a universal field of consciousness, as envisioned by many of the great pioneers of modern physics, and given that it can be directly experienced in the self-referral state of one's own consciousness, why or how would this experience produce coherence in the individual and society? An implicit principle in this view is that natural law has a fundamental purpose, which is to structure coherence as defined above (Maharishi Mahesh Yogi, 1986a, pp.

24–28). The observed universe is created from the unmanifest, self-referral dynamics of the unified field of nature’s intelligence; because the unified field of nature’s intelligence is a field of pure consciousness, the character of this self-referral activity is self-knowledge of its entire range—from infinity to a point (Maharishi Mahesh Yogi, 1986a). The human nervous system is nature’s instrument for knowing itself in its entirety. The nervous system has the capacity to experience the holistic level of natural law, the unified field of nature’s intelligence as transcendental consciousness (Maharishi Mahesh Yogi, 1967, pp. 39–40). “Vedic Science has all the wealth of total knowledge of the knower, the process of knowing, and the known” (Maharishi Mahesh Yogi, 1986a, p. 28). Since transcendental consciousness is the basis of the human mind and is the knower, the Self, the expansion of self-knowledge means increasing knowledge of our own consciousness from its infinite basis to all its finite expressions (Maharishi Mahesh Yogi, 1972, p. 19-6). Because one of the basic qualities of the unified field, and hence transcendental consciousness, is bliss (please refer to Hagelin’s article in this issue), the expansion of self-knowledge is accompanied/motivated by the expansion of happiness. The purpose of human life, the expansion of self-knowledge, can thus be said to be the expansion of happiness (Maharishi Mahesh Yogi, 1963).

This expansion of self knowledge and happiness means that life is becoming more in accord with natural law, because the Self, perfect bliss, is also the total potential of natural law. Thus the happiest persons are the knowers of the Self, the most in accord with natural law, and the greatest contributors to coherence in society. Moreover, increasing coherence in the individual and society is a spontaneous and effortless process, because of the nature of the mind to gravitate towards increasing charm. It follows that the ubiquitous emergence of societies is a spontaneous expression of the bliss quality of the unified field of nature’s intelligence. It is more fun to live together and even more fun to live in a coherent society where everyone supports everyone else’s evolution. The universal principle guiding communal life, embodied in the great religious codes and national constitutions, express the purpose of natural law to create perfect happiness, prosperity, and self-knowledge for all. Yet, Maharishi (1986a) points out, people must be educated to directly experience the self-referral fountainhead of natural law. “As we gain more and more familiarity with that self-referral performance, our thoughts and actions spontaneously begin to be as orderly and evolutionary as all the activity of nature” (p. 97).

It may be remarkable for a scientist to think that the human nervous system is not just an accidental outcome of the evolution of physical matter (a very unsatisfying and epistemologically problematic point of view), but rather that it is nature’s instrument through which nature, which is fundamentally the unified field of pure consciousness, can know itself in its entirety. From this perspective, all human activities are fundamentally for the purpose of expanding self-knowledge and happiness. As the human mind looks out onto the galaxies, it is ultimately looking for itself. Anything we do increases our self-knowledge, and if it increases our happiness, it is nature’s signal that we are evolving in the direction of Self-knowledge, knowledge of the unified field within us.

Higher states of consciousness. Maharishi has brought to light that higher states of consciousness are a sequential development based on establishing the permanent experience of transcendental consciousness, the Self, the unified field of natural law

(Maharishi Mahesh Yogi, 1967; Orme-Johnson, 1988a, 1988b). There are seven states of consciousness, of which the first three are the familiar states of waking, dreaming, and sleeping. Transcendental consciousness is the fourth, and the three higher states, cosmic consciousness, God consciousness, and unity consciousness are a sequence of stable states of enlightenment (Maharishi Mahesh Yogi, 1972, Lesson 23; Alexander & Boyer, 1989).

In the fourth state described by Maharishi, transcendental consciousness, the unified field of nature's intelligence is experienced to the exclusion of all other experience. All the active phases of the mind are inhibited at that time. In the fifth state, cosmic consciousness, further neurological refinement allows transcendental bliss consciousness, the Self, to be experienced as a stable background or witness throughout the cycle of waking, dreaming, and sleep. The mind becomes permeated with bliss in cosmic consciousness, which cultures the experience of the sixth state of consciousness. The sixth state is characterized by appreciation of the most refined, celestial levels of perception, and tidal waves of love and devotion for the creation and its creator, hence the name God-consciousness. Through further neurophysiological refinement, the seventh state, unity consciousness, dawns, in which even the environment, which was previously conceived to be objective and external, is appreciated in terms of the Self. This is the climax of self-knowledge, in which all phases of existence, subjective and objective, are appreciated to be nothing other than the unified field of nature's intelligence, the Self moving within itself. This state of consciousness is described by one of the *mahavakyas* (great sayings) of the Upanishads, which declares, "I am That, thou art That, all This is That."

Maharishi has brought to light that several thousand years ago Patanjali referred to this approach to peace in his *Yoga Sutras* (1912/1978) (from which the TM-Sidhi program is derived) in his statement "*tat sannidhau vairatyagah.*" Maharishi translates Patanjali's statement as "in the vicinity of those who are experiencing *yog* (union)—transcendental consciousness, pure consciousness—hostile or violent tendencies are eliminated."

Maharishi (1986a) explains that an influence of coherence spreads in the environment because transcendental consciousness is a state of infinite correlation:

This transcendental level of nature's functioning is the level of infinite correlation. When the group awareness is brought in attunement with that level, then a very intensified influence of coherence radiates and a great richness is created. Infinite correlation is a quality of the transcendental level of nature's functioning from where orderliness governs the universe. (p. 75)

The real genius of Maharishi's theory of collective consciousness and its application to peace, which sets it apart from all other theories and approaches, is that it is empirically testable in actual international conflicts.

Empirical Research on the Maharishi Effect

The availability of the Transcendental Meditation and TM-Sidhi program, a technology to directly influence collective consciousness, and the measurable effects of this

influence, have opened the door to research in collective consciousness. A growing research program indicates that the practice of this set of specific mental techniques for enhancing social harmony and reducing tension can quickly and significantly reduce levels of crime and violence, even at national and international levels (e.g. Dillbeck, Cavanaugh, Glenn, Orme-Johnson, & Mittlefehldt, 1987; Dillbeck, Banus, Polanzi, & Landrith, 1988; Cavanaugh, 1987; Dillbeck, 1990; Orme-Johnson, Alexander, Davies, Chandler, & Larimore, 1988; Orme-Johnson, Alexander, & Davies, 1990; Orme-Johnson & Dillbeck, in press). In the tradition of naming findings after the scientists who discovered them (e.g., the Doppler Effect, the Meissner Effect), the effect of groups of individuals practicing the Transcendental Meditation and TM-Sidhi program has been named the Maharishi Effect in honor of Maharishi who predicted it and provided the technology to implement it (Borland & Landrith, 1977).

The Discovery of the Maharishi Effect

In the early 1960s Maharishi predicted that as little as 1% of a population practicing the Transcendental Meditation technique would create an influence of harmony throughout the entire society. Maharishi based his prediction that a few could affect many on the principle of coherence in physics, in which influence of the coherent elements in a system is much greater than that of the incoherent elements (Borland & Landrith, 1977; Hagelin, 1987, 1989; Orme-Johnson et al., 1988). Research on the Maharishi Effect began in 1974, when researcher Garland Landrith of Maharishi International University (MIU) tested Maharishi's prediction on crime rate in 4 Midwestern cities where 1% of the population had learned the Transcendental Meditation technique. He reported that crime rate decreased significantly the year after each became a 1% city, comparing the 1% cities with other cities of similar size and geographic location. Using FBI data, the study was expanded to include all 11 cities over 25,000 population with 1% practicing the Transcendental Meditation technique (Borland & Landrith, 1977), and by using data from local police for cities with 10,000 population, it was expanded again to include all 24 cities that had reached 1% of their population practicing Transcendental Meditation in 1972 (Dillbeck, Landrith, & Orme-Johnson, 1981). The finding of significant reduction in crime rate was replicated both times. In the second replication, not only did crime rate decrease the year after 1% was reached, but the crime rate trend was lower for those cities over the following six years, controlling for total population, geographic region, college population, unemployment rate, median education level, stability of residence, percentage of persons 15–29 years old in the population, and a number of other variables (please refer to Figure 1).

Causal Analysis

The most comprehensive studies of the Maharishi Effect on the city level employed causal analyses of crime trends over a period of seven years in random samples of 160 U.S. cities and 50 Standard Statistical Metropolitan Areas (SSMA's), the latter sample representing approximately half the urban population of the U.S. (Dillbeck et al, 1988).

These studies, which were published in the *The Journal of Mind and Behavior*, found that cities and metropolitan areas with higher proportions of meditators in 1973 had reduced crime trends for the next six years. In neither study did the level of crime predict

Maharishi Effect: Increased Positivity, Decreased Crime
THROUGH TRANSCENDENTAL MEDITATION

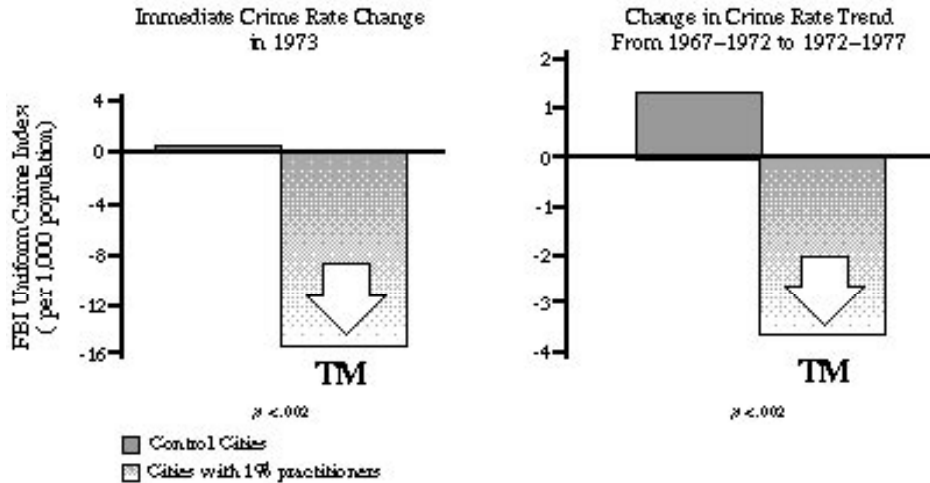


Figure 1. Twenty-four cities in which 1% of the population had been instructed in the Transcendental Meditation program by 1972 displayed significant decreases in crime rate during the next year (1973), and a decreased crime rate trend during the subsequent five years (1972–1977) in comparison to 1967–1972). This finding was in contrast to an overall increase in crime in 24 control cities matched for geographic region, population, college population, and crime rate, statistically controlling for a number of other demographic variables.

the number of meditators in the population in future years. Thus, Transcendental Meditation apparently influenced the crime rate but crime rate did not influence TM, suggesting that TM was the causal element in the correlation between the two. Both studies statistically controlled for virtually all demographic variables known to influence crime, and a significant and stable causal structure was found for both samples, the 160 cities and the 50 SSMA's.

The TM-Sidhi Program and Super Radiance

A major breakthrough in the Maharishi Effect research came in 1976 with the introduction of the more powerful TM-Sidhi program. The incredible impact of the TM-Sidhi program on collective consciousness was discovered in 1978 during Maharishi's Ideal Society Campaign, which was conducted in selected states and provinces in 20 countries. Maharishi sent teams of teachers of the Transcendental Meditation technique to these countries in order to try to inspire 1% of the local populations to learn the technique and to create an ideal society. As it happened, these teachers practiced the TM-Sidhi program together in groups, particularly the powerful Yogic Flying technique (Orme-Johnson & Gelderloos, 1988; Travis & Orme-Johnson, 1990). It was discovered that groups on the order of the *square root of 1%* of a population collectively practicing

the TM-Sidhi program were sufficient to produce a measurable and holistic influence of harmony and integration in the entire population (Dillbeck et al., 1987; cf. Maharishi Mahesh Yogi, 1986a, p. 76). This phenomenon has been named *Super Radiance*, after the superradiance phenomenon in lasers, in which the power of the coherent elements of the system is proportional to their number squared. Studies now have demonstrated its effect on the city, state, national, and international levels. For example, the first study of Super Radiance was conducted on the state level in Rhode Island and was published in *The Journal of Mind and Behavior* (Dillbeck et al., 1987). It found improvements on a quality-of-life index that included crime, deaths, unemployment, alcohol consumption, cigarette consumption, pollution, motor vehicle fatalities, and accidents.

The square root of 1% of a population is a relatively small number, making controlled studies even on the national and world level possible. For example, the square root of 1% of the U.S. population is currently approximately 1,600, and the square root of 1% of the world population is approximately 7,000.

The Establishment of a National Super Radiance Group

Since 1979, a group of Transcendental Meditation and TM-Sidhi participants ranging in size from a few hundred to over 8,000 has gathered twice a day at Maharishi International University in Fairfield, Iowa, for the purpose of creating coherence in the U.S. and the world. A study published in *Social Indicators Research* (Dillbeck, 1990) found a significant effect of the MIU group on U.S. violent deaths per week (homicides, suicides, and traffic fatalities) from 1979 to 1985. The square root of 1% of the U.S. population in 1985 was approximately 1,550, and the study found that an increase in Super Radiance groups size at MIU from zero to 1,550 corresponded to a decrease of 106 fatalities per week (please refer to Figure. 2). The study used time series analysis that controlled for seasonal fluctuations, trends, and drifts in the data. A similar time series analysis found a reduction in violent deaths in Canada when the threshold of 1,600 for North America was reached (Assimakis, 1989).

Using a similar research design, in a series of papers presented at the Business and Economics Statistics Session of the annual conference of the American Statistical Association, Cavanaugh and his collaborators found significant reductions in Okun's Misery Index of inflation and unemployment for both the U.S. and Canada, controlling for a number of economic factors (Cavanaugh, 1987; Cavanaugh & King, 1988; Cavanaugh, King, & Ertuna, 1989; please refer to Cavanaugh's article in this issue).

Another study of the effects of the MIU Super Radiance program on the quality of life in the United States used an equally weighted composite index of 12 social indicators from the fields of crime, justice, health, education, economic welfare, creativity, marital stability, and safety for the 25-year period from 1960 through 1984 (Orme-Johnson, Gelderloos, & Dillbeck, 1988). The magnitude of the Maharishi Effect was estimated by the *Maharishi Effect Index* that took into account the percentage of Transcendental Meditation participants distributed throughout the United States as well as the square root of 1% of the number of Transcendental Meditation and TM-Sidhi participants in the group practice at MIU.

Analysis of the quality-of-life index showed a virtually continuous downward trend

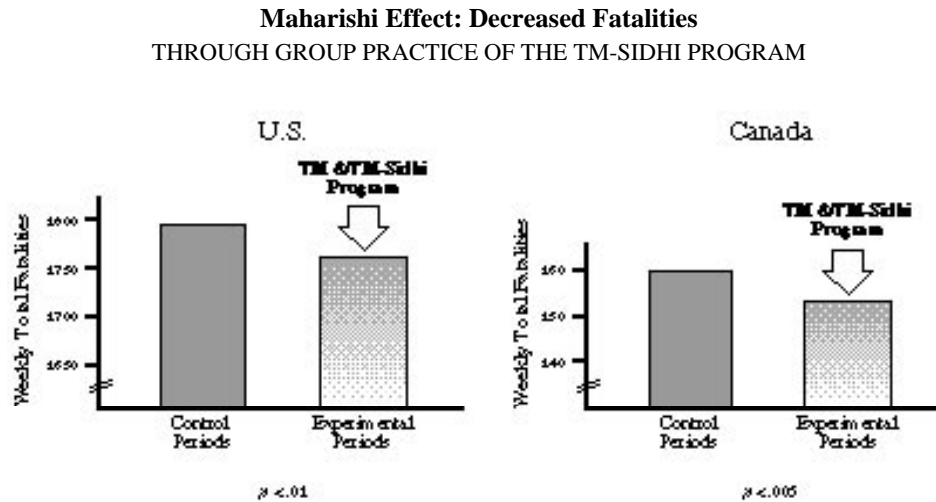


Figure 2. Two studies using time series impact assessment analysis found a significant reduction in weekly fatalities due to motor vehicle accidents, homicides, and suicides in the United States (1982–1985) and Canada (1983–1985) during periods in which the size of groups practicing the Transcendental Meditation and TM-Sidhi program at Maharishi International University in Fairfield, Iowa, U.S.A. exceeded the square root of 1% of the U.S. population, or of the U.S. and Canadian population together for an effect seen in Canada. During periods when the size of the groups were smaller than the square root of 1% of the U.S. and Canadian populations, fatality rates were higher.

in the overall quality of life in the United States from 1960 to 1975. This negative trend began to level off starting in 1975. During the years 1982–1984, when the group of Transcendental Meditation and TM-Sidhi program participants at MIU was large enough to have a predicted effect on national consciousness, there was a dramatic increase in U.S. quality of life. The total improvement of 7.17% on the quality-of-life index over this 3-year period was 5.2 times greater than any 3-year improvement in the prior 22 years. Clearly, an unprecedented change in recent U.S. history had occurred.

A further analysis of the different quality-of-life variables in this study used a multivariate method of analysis of covariance structures (e.g., Jöreskog & Sörbom, 1979; Long, 1983) implemented by the LISREL VI program (Jöreskog & Sörbom, 1986). The covariance structure model combines the approaches of factor analysis and structural equation causal modeling to assess the impact of independent variables on a set of *latent* variables underlying a group of observed variables. Two quality-of-life factors were found, a general factor and a secondary factor, and the MIU Super Radiance group had a significant effect on both factors, accounting for 80.4% of the variance of the general factor and 60.3% of the secondary factor.

These studies provide strong evidence that the MIU Super Radiance group has significantly influenced the quality of life in the United States, as seen in a reduction of deaths due to suicides, homicides, and traffic fatalities (Dillbeck, 1990), a reduction in

inflation and unemployment (Cavanaugh, 1987; Cavanaugh & King, 1988; Cavanaugh, King, & Ertuna, 1989), and an improvement in the general quality of life (Orme-Johnson et al., 1990).

The World Peace Project

Immediately following the discovery of the Super Radiance effect in the fall of 1978, Maharishi decided to apply it to resolve conflicts in the international arena. More than 1,400 experts in the Transcendental Meditation and TM-Sidhi program were sent, for approximately two months (November and December, 1978), to several trouble spots of the world, including Central America (Nicaragua), the Middle East (Lebanon), southern Africa (Rhodesia—now Zimbabwe and Zambia), and to Southeast Asia (Cambodia) as well as to surrounding countries. Their effect was studied using an independent data base, the Conflict and Peace Data Bank (COPDAB), 1948–1978: Daily Aggregations (Azar, 1982). The COPDAB file is the largest daily data bank in the world coding for conflict in international affairs, including data from over 70 major news sources.

During the World Peace Project the percentage of hostile actions between countries as well as between factions within the trouble spots decreased 36% relative to the baseline period, and cooperative events increased by 37%. The proportional reduction in hostile acts in these trouble-spot countries was twice as great as the change at that time in the rest of the world, which was used as a control (Orme-Johnson, Dillbeck, Bousquet, & Alexander, 1990).

The COPDAB data also showed that the type of events shifted significantly from military issues (troop deployment, security pacts, defense treaties, wars, prisoner-of-war releases or exchanges, guerrilla raids, etc.) to nonmilitary issues (cultural, economic, political order, legal, human environmental, physical environmental, and natural resources). Thus, for the time that the groups of Maharishi's Transcendental Meditation and TM-Sidhi participants were in or near the trouble spots, conflict decreased, cooperation increased, and balance was restored as seen in an increase in nonmilitary interactions. This finding can be interpreted as a shift in the focus of collective consciousness from destructive toward cooperative interaction, as stresses in collective consciousness began to be neutralized and coherence increased.

The International Peace Project in the Middle East

A major experimental test of the application of the Maharishi Effect to resolve international conflict was published in the *Journal of Conflict Resolution* (Orme-Johnson et al., 1988). This study took place in Israel for a two-month period (August and September) in 1983, during the war in Lebanon. The project was funded in part through a grant in honor of William Ellinghaus, then president of American Telephone and Telegraph Company, from the Fund for Higher Education. Predictions were lodged in advance with scientists in the U.S. and in Israel. The variables, such as traffic accidents, crime rate, and fires, all of which are major problems in Israel, were selected because they had been used in previous experiments. As a measure of the war in Lebanon, two war variables, war deaths and war intensity, were derived by content analysis of a major newspaper and other media sources using a scaling method modeled after Azar's (Azar, 1982). Other variables included the Israeli national stock market and the national mood

from content analysis of a major newspaper. All variables were derived from publicly available data sources. The independent variable, the group size of Transcendental Meditation and TM-Sidhi participants, was sent on three different occasions to members of the review board before any of the data analysis was undertaken.

It can be seen in Figure 3 that during the first two weeks, the numbers rose gradually in response to the call for the project, and then remained high for a 13-day period, after which they fluctuated. The 13-day high period was created at an arbitrarily selected time in order to approximate as closely as practicable a true random-assignment experiment. During that time, course participants were offered advanced meditation techniques as incentives to attend the course. During this 13-day period, war deaths were a mean of 1.5 per day compared with a mean of 33.7 per day for the 13-day periods immediately before and after the experimental period.

Figure 3 shows that the overall composite index of all the variables mentioned above, and the size of the coherence-creating group, closely track one another. Statistical analysis using the Box-Jenkins (1976) ARIMA (auto-regressive, integrated, moving, averages) time series methods of transfer functions showed that change in the

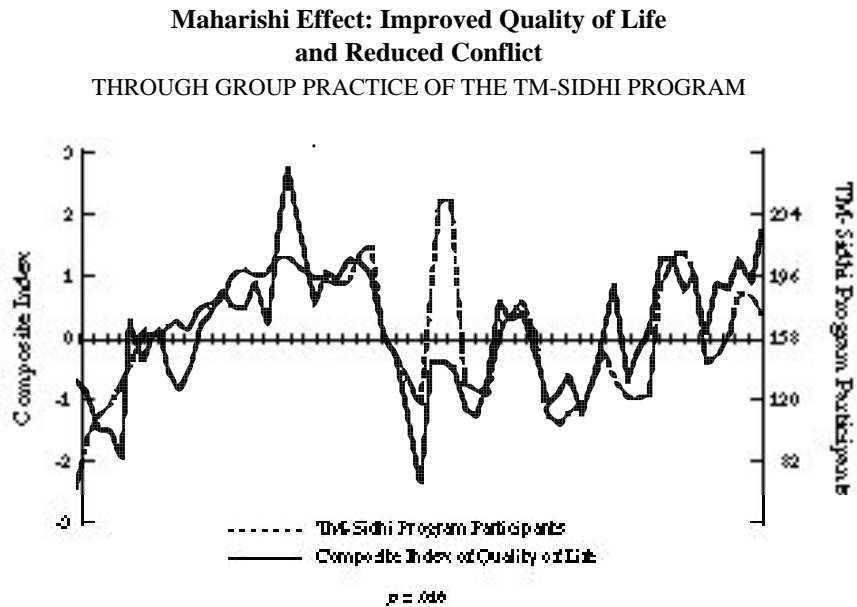


Figure 3. Based on previous research, scientists predicted that the collective practice of the Transcendental Meditation and TM-Sidhi program by a group in Jerusalem would increase positive trends and decrease negativity in the Middle East. The sociological parameters measured were lodged in advance with an independent review board of scientists in the U.S. and Israel. This study indicated that increasing the numbers of participants engaged in Maharishi's Transcendental Meditation and TM-Sidhi program improved the quality of life in Israel as measured by an index comprised of decreases in crime rate, traffic accidents, fires, and the number of war deaths in Lebanon, and by increases in the national stock market and improvements in national mood.

size of the coherence-creating group significantly led change in the composite index by one day, controlling for any seasonal fluctuations in the data, as well as controlling for changes in the weather and holidays. This means that the up-and-down variations in the size of the coherence-creating group were followed by a corresponding variation in the overall quality of life in the region, supporting a causal interpretation.

Using two time series methods, transfer function and impact assessment, all the individual and composite variables were found to be statistically significant. Of particular interest was an index of the war in Lebanon, computed as the arithmetic mean of the normalized (Z-transformed) war deaths and war intensity variables. This variable was subjected to an exhaustive time series analysis and the results were verified using 14 alternative specifications of the *noise* model. The noise model is the mathematical model of the dependent variable (the index of war) that statistically removes all cycles, trends, and drifts from the data (hence reducing the time series to “noise” with respect to any time-dependent structure that it may have had; that is, removing these spurious effects so that the effect of the independent variable can be accurately evaluated). Then the independent variable (the coherence-creating group) is entered into the equation to see if it has an independent effect on the war. Because cycles in sociological data are statistical (stochastic) rather than exact, there can usually be alternative ways of modeling, i.e., there may be alternative specifications of the noise model. One objective criteria of “best” model is minimization of the Akaike Information Criterion (AIC, Akaike, 1973) which provides the model with the optimal balance between the opposing goals of parsimony and model fit when evaluating model order and model structure. The model with the lowest AIC is the model that gives the best prediction with the least number of parameters (Larimore, 1983, 1986; Larimore & Mehra, 1985).

By analyzing 14 alternative noise models of the war index, we found that the better the noise model (i.e., the lower the AIC), the more highly statistically significant was the effect of the coherence-creating group on reducing the war. This indicates that the effect was not spuriously due to some particular noise model. Moreover, this analysis showed that as more of the background variation in the index of war was accounted for by better noise models, the more clearly the effect of the coherence-creating group emerged from the data ($t = 5.0, p < .0001$ for the best model).

There were several interesting aspects about this data which support a causal interpretation that increasing the size of the coherence-creating group *caused* a reduction in the war in Lebanon:

1. During the arbitrarily selected period when the group size was experimentally increased by offering incentives to course participants, the war in Lebanon subsided dramatically.
2. The results of time series analyses were robust with respect to different specifications of the noise model, and the best model yielded the most significant effect, as noted above. This shows that the reduction in hostilities during days when the coherence-creating group was largest was not due to a spurious correspondence of changes in the size of the coherence-creating group with already existent cycles or trends in the data, nor due to any unknown variable(s) that might be causing these variations.

3. The 15 out of 61 total days when the group was largest were randomly distributed over the experiment, yet there were 76% fewer war deaths during these days compared to the 15 days when the group was smallest.
4. The results could not be accounted for by holidays or temperature, whose effects were accounted for by entering them as separate variables in the time series analysis.
5. None of the dependent variables systematically led in time the changes in the size of the coherence-creating group, whereas the group size did lead changes in many of the dependent variables, suggesting causality, because the cause must precede or be at the same time as the effect. In the case of the index of war variables there was a same day (lag 0) effect, indicating that the war decreased on the same day that the coherence-creating group increased. In this case, it is significant to note that the group met in the morning and early afternoon, whereas if hostilities occurred, they usually did so in the evening. Thus, the mediator variable preceded the decrease in hostilities. These different results all support a causal interpretation (Orme-Johnson et al., 1988, p. 804; Orme-Johnson, Alexander, & Davies, 1990).

Another very interesting finding in this study was that when the individual variables were combined into a composite variable, the results were the clearest, as seen in Figure 3, which shows the clear covariance between the composite of all the raw data and the coherence-creating group. Adding the individual variables together is a type of signal averaging that enhances the common variance. As a result, the composite of all the variables most clearly shows their common variance. The finding that changes in the composite variable correspond most clearly to changes in the coherence-creating group is strong empirical evidence that the common variance underlying these diverse social processes was in fact generated by the coherence-creating group functioning at a fundamental level of natural law (Orme-Johnson et al., 1988, p. 806).

Replication of Reduced War in Lebanon

Experimental replication is the most powerful test of the reliability of a new discovery. These dramatic results on the Lebanon war have now been replicated *seven* times with a statistical probability of less than 10^{-19} or one in ten million trillion, that the results were due to chance (Davies & Alexander, 1989; please refer to Davies's article in this issue). This study, which was presented at the annual conference of the American Political Science Association in 1989, found that during seven coherence-creating assemblies large enough to have a predicted impact on the war in Lebanon, war fatalities decreased by an average of 71%, war injuries decreased by 68%, and cooperation among antagonists increased by 66%. The degree of statistical certitude of this finding is unheard of in even the physical sciences, lending strong support to the reliability and legitimacy of the theory and empirical evidence of the Maharishi Effect.

The Global Maharishi Effect

This research showing that coherence-creating groups can reliably quell regional conflict makes it imperative to establish groups large enough to create coherence for the whole world. After seeing the results of the first study in the Middle East, even before

the evidence of extensive replication was amassed, Maharishi, in late 1983, set out to create an assembly of 7,000 practitioners of the Transcendental Meditation and TM-Sidhi program, the square root of 1% of the world's population, in order to give the world a "Taste of Utopia." In addition, he created a tradition of holding large assemblies every quarter in the hopes of raising world consciousness and demonstrating effects that would inspire the world leadership to establish permanent coherence-creating groups as a sustained peacekeeping force in every country.

A study of the effects of these assemblies on world-wide international conflicts, terrorism, and economic confidence was presented at the American Political Science Association and American Psychological Association in 1989 and 1990, respectively (Orme-Johnson, Dillbeck, Alexander, Chandler, & Cranson, 1989; Orme-Johnson et al. 1990). This study found that on the three occasions when the world assemblies approached the 7,000 threshold needed for global coherence, that international conflicts decreased by more than 30%, according to a content analysis of *The New York Times* and *London Times*, and that international terrorism decreased by more than 70%, using data compiled by the Rand Corporation (please refer to Figure 4). In addition, the World Index of international stock prices in the 19 major industrial countries increased significantly, indicating increased economic confidence. As in other studies, time series analysis

Global Maharishi Effect: Reduced International Conflicts and Terrorism
THROUGH TRANSCENDENTAL MEDITATION

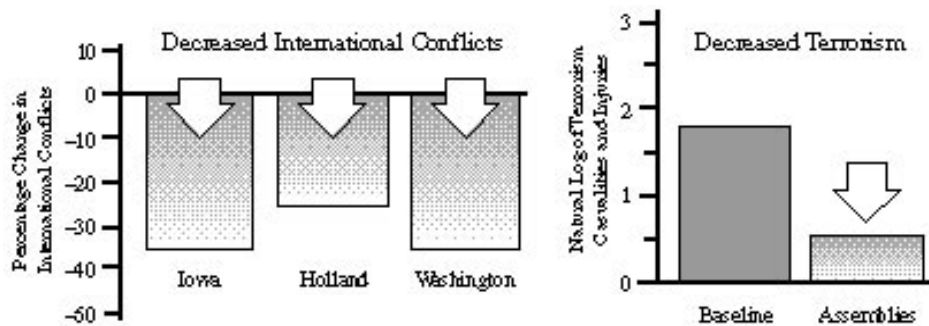


Figure 4. Based on previous research, scientists predicted in advance that three international World Peace Assemblies would have a measurable positive influence on trends of life throughout the world. At these three assemblies held in Iowa, Holland, and Washington, D.C., the number of experts practicing the Transcendental Meditation and TM-Sidhi program approached or surpassed 7,000, which is approximately the square root of 1% of the world's population—the number predicted to be needed for such a group to influence world consciousness. Time series analysis showed that during the three experimental periods, there were significant global reductions in international conflicts as measured by content analysis of major newspapers. There was also a significant decrease in casualties and injuries due to terrorism during these periods, as indicated by time series analysis of a data bank provided by an independent research organization. In addition, major world-wide economic indicators showed a significant improvement during the large assemblies.

ruled out the possibility that the results were spuriously due to cycles, trends, or drifts in the measures used. The study also showed that the results were not due to changes that usually occur during the year-end holiday seasons when two of the assemblies were held.

Improved U.S.-Soviet Relations

The most dramatic political change of the twentieth century is the warming of relations between the superpowers with its enormous world-wide implications. In some of the studies reviewed above, the Maharishi Effect had a calming effect in trouble-spot areas in which the Americans and Soviets were involved on opposite sides, indicating indirectly and sometimes directly that the coherence-creating groups soothed the relations between the superpowers. This evidence is further strengthened by studies of the statements of heads of state. According to Maharishi's principles of collective consciousness, the statements of the head of state reflect the quality of national collective consciousness because the head of state is the innocent mirror of national consciousness (Maharishi Mahesh Yogi, 1976). For example, one study analyzed statements by President Reagan, published by the U.S. government's Office of the Federal Register of National Archives and Records Administration in the *Weekly Compilation of Presidential Documents* from April 1985 to September 1987. Box-Tiao impact assessment analysis revealed a highly significant effect of the collective practice of the Transcendental Meditation and TM-Sidhi program at MIU on improving U.S.-Soviet relations (Gelderloos, Frid, & Xue, 1989). These findings indicate that increased coherence in U.S. national consciousness through the Maharishi Effect was reflected in the increased positivity of the president's statements about the USSR.

Another study on the effects of the MIU Super Radiance group on U.S.-Soviet relations used the data base from the Zurich Project on East-West Relations, which has tracked U.S.-Soviet relations by content analysis of news events from 1979 to 1986. The study divided the size of the MIU group into quartiles; less than 1,100, 1,100–1,500, 1,500–1,700, above 1,700. When the group reached the Super Radiance threshold of the square root of 1% of the U.S. population (1,500–1,700), the U.S. actions towards the Soviets began to become significantly more positive. U.S. behavior towards the Soviets became even more positive when the MIU group was over 1,700, and moreover, Soviet behavior towards the U.S. also became significantly more positive when the group was largest (Gelderloos, Cavanaugh, & Davies, 1990). This data is the first empirical explanation of why East-West relations have suddenly improved. The Maharishi Effect, by creating coherence in national and world consciousness, has dramatically changed the historical destiny of our time (please refer to Figure 5).

Conclusion

Only a technology that operates from the unified field of nature's intelligence could be powerful enough and unifying enough to bring harmony to all the diversity of cultures and political systems in the world. Just as quantum field theory has provided a deeper level of analysis of physical phenomena which complements the value of the classical level of analysis, so too a deeper level of analysis of social phenomena is possible which

**Maharishi Effect: Improved East-West Relations
THROUGH GROUP PRACTICE OF THE TM-SIDHI PROGRAM**

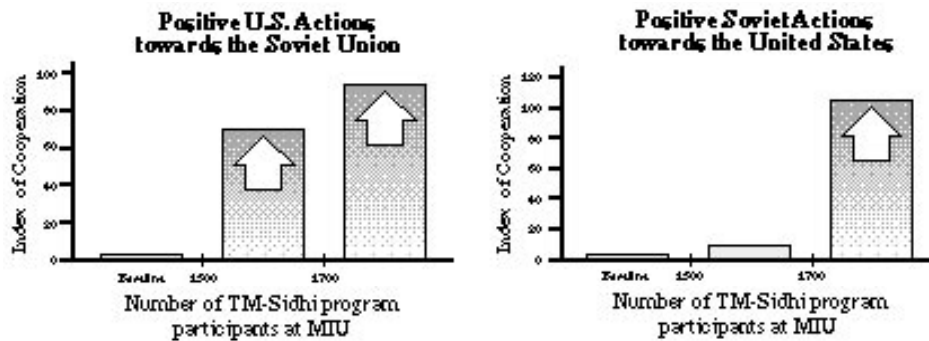


Figure 5. This study investigated the contribution of a large coherence-creating group at Maharishi International University in the U.S. towards improvement in relations between the U.S. and the Soviet Union from 1979–1986. The study was of monthly ratings of cooperation and conflict, obtained from independent investigators (the Zurich Project on East-West Relations) of all interactions of the U.S. towards the Soviet Union and of the Soviet Union towards the U.S. Time series analysis showed that during the months following periods when the size of the coherence-creating group was above the predicted thresholds (i.e., above 1,500 and 1,700), there was a significant improvement in U.S. actions towards the USSR. In months after the group size was above 1,700, Soviet actions towards the U.S. also significantly improved. The overall impact of the coherence-creating group on the U.S.-Soviet interaction was highly significant ($p < .00001$).

complements the behavioral levels of analysis of contemporary social science theory. Studies of the Maharishi Effect provide empirical demonstration of the efficacy of such an approach. Methodologically, the studies on the Maharishi Effect are the first experimental research in history to actually attempt to resolve real conflicts on national and international scales, and they have used state-of-the-art statistical methodologies. There is no other research program in the conflict resolution literature that is more directly relevant and more rigorously validated for creating world peace than Maharishi's. The studies have been replicated in many different populations across a variety of measures in virtually all of the world's major conflicts. The studies have included all instances of the phenomenon, such as all 1% cities (Borland & Landrith, 1977; Dillbeck et al., 1981), the entire period of the MIU Super Radiance group since its inception in 1979 in studies of violent death and inflation/unemployment (e.g., Dillbeck, 1990; Cavanaugh, 1987), and all cases in which the size of a Transcendental Meditation and TM-Sidhi group was large enough to have a predicted impact, as in the study of the Lebanon war (e.g., Davies & Alexander, 1989) or on the world (Orme-Johnson et al., 1989). With all of this evidence and profound theory, if this technology of peace is not being implemented it can only be for the political reasons of special interest groups, and does not serve the purpose of the people of the world, who deeply desire peace and prosperity for themselves and for the generations to come.

Maharishi (1986b) outlines three simple steps to permanent world peace. First step: Create coherence in world consciousness through establishing a permanent group of 10,000 experts in the Transcendental Meditation and TM-Sidhi program. Second step: Create coherence in national consciousness in every country by establishing coherence-creating groups numbering the square root of 1% of that nation's population. Third step: Create coherence in city consciousness by establishing a coherence-creating group numbering the square root of 1% of the population for all of the cities of every country (pp. 21–24). As Maharishi (1986a) has commented:

Whether it's done by individuals in the continent or by governments, whoever creates the groups of 7,000 will have the flag of eureka! for world peace. I don't see any other effective program for world peace. (p. 163)

References

- Akaike, H. (1973). Information theory and an extension of the maximum likelihood principle. In B. N. Petrov & F. Csake (Eds.), *Second international symposium on information theory* (pp. 267–281). Budapest: Akademiai Kiada.
- Alexander, C. N. (1992). Peaceful body, peaceful mind, peaceful world. *Modern Science and Vedic Science*, 5, 150–164, in this issue.
- Alexander, C. N., & Boyer, R. W. (1989). Seven states of consciousness: Unfolding the full potential of the cosmic psyche in individual life through Maharishi's Vedic Psychology. *Modern Science and Vedic Science*, 2, 325–371.
- Alexander, C. N., Davies, J. L., Dixon, C. A., Dillbeck, M. C., Oetzel, R. M., Drucker, S. M., Muehlman, J. M., & Orme-Johnson, D. W. (1990). Growth of higher stages of consciousness: Maharishi's Vedic psychology of human development. In C. N. Alexander & E. J. Langer (Eds.), *Higher Stages of Human Development: Perspectives on Adult Growth* (pp. 286–341). New York: Oxford University Press.
- Assimakis, P. D. (1989). Change in the quality of life in Canada: Intervention studies of the effect of the Transcendental Meditation and TM-Sidhi program. *Dissertation Abstracts International*, 50, 2203B.
- Azar, E. E. (1982). *Conflict and peace data bank (COPDAB): A computer-assisted approach to monitoring and analyzing international and domestic events*. College Park, MD: Center for International Development and Conflict Management, University of Maryland.
- Borland, C., & Landrith, G. S., III. (1977). Improved quality of life through the Transcendental Meditation program: Decreased crime rate. In D. W. Orme-Johnson & J. T. Farrow (Eds.), *Scientific research on the Transcendental Meditation program: Collected papers* (Vol. 1). Rheinweiler, W. Germany: Maharishi European Research University Press.
- Box, G. E. P., & Jenkins, G. M. (1976). *Time series analysis: Forecasting and control*. San Francisco: Holden-Day.
- Cavanaugh, K. L. (1987). Time series analysis of U.S. and Canadian inflation and unemployment: A test of a field-theoretic hypothesis. In *Proceedings of the American Statistical Association, Business and Economics Statistics Section* (pp. 799–804). Alexandria, VA: American Statistical Association.
- Cavanaugh, K. L. (1992). Maharishi's Vedic Science and Technology: Promoting economic development and world peace. *Modern Science and Vedic Science*, 5, 172–181, in this issue.

- Cavanaugh, K. L., & King, K. D. (1988). Simultaneous transfer function analysis of Okun's misery index: Improvements in the economic quality of life through Maharishi's Vedic Science and Technology of consciousness. In *Proceedings of the American Statistical Association, Business and Economics Statistics Section* (pp. 491–496). Alexandria, VA: American Statistical Association.
- Cavanaugh, K. L., King, K. D., & Ertuna, C. (1989). A multiple-input transfer function model of Okun's misery index: An empirical test of the Maharishi Effect. In *Proceedings of the American Statistical Association, Business and Economics Statistics Section* (pp. 565–570). Alexandria, VA: American Statistical Association.
- Chalmers, R. A., Clements, G., Schenkluhn, H., & Weinless, M. (Eds.). (1989a). *Scientific research on Maharishi's Transcendental Meditation and TM-Sidhi programme: Collected papers* (Vol. 2). Vlodrop, the Netherlands: Maharishi Vedic University Press.
- Chalmers, R. A., Clements, G., Schenkluhn, H., & Weinless, M. (Eds.). (1989b). *Scientific research on Maharishi's Transcendental Meditation and TM-Sidhi programme: Collected papers* (Vol. 3). Vlodrop, the Netherlands: Maharishi Vedic University Press.
- Chalmers, R. A., Clements, G., Schenkluhn, H., & Weinless, M. (Eds.). (1991). *Scientific research on Maharishi's Transcendental Meditation and TM-Sidhi programme: Collected papers* (Vol. 4). Vlodrop, the Netherlands: Maharishi Vedic University Press.
- Davies, J. L., & Alexander, C. N. (1989). Alleviating political violence through enhancing coherence in collective consciousness: Impact assessment analyses of the Lebanon war. Presented at the 85th Annual Meeting of the American Political Science Association. (Please refer also to Davies, J. L. (1988). *Dissertation Abstracts International*, 49, 2381A.
- D'Espagnat, B. (1979). The quantum theory and reality. *Scientific American*, 241(5), 158–181.
- Dillbeck, M. C. (1988). The self-interacting dynamics of consciousness as the source of the creative process in nature and human life: The mechanics of individual intelligence arising from the field of cosmic intelligence—the cosmic psyche. *Modern Science and Vedic Science* 2, 245–278.
- Dillbeck, M. C. (1990). Test of a field theory of consciousness and social change: Time series analysis of participation in the TM-Sidhi program and reduction of violent death in the U.S. *Social Indicators Research*, 22, 399–418.
- Dillbeck, M. C., Banus, C. B., Polanzi, C., & Landrith, G. S., III. (1988). Test of a field model of consciousness and social change: The Transcendental Meditation and TM-Sidhi program and decreased urban crime. *The Journal of Mind and Behavior*, 9, 457–486.
- Dillbeck, M. C., Cavanaugh, K. L., Glenn, T., Orme-Johnson, D. W., and Mittlefehldt, V. (1987). Consciousness as a field: The Transcendental Meditation and TM-Sidhi program and changes in social indicators. *The Journal of Mind and Behavior* 8, 67–104.
- Dillbeck, M. C., Landrith, G. S., III., & Orme-Johnson, D. W. (1981). The Transcendental Meditation program and crime rate change in a sample of forty-eight cities. *Journal of Crime and Justice*, 4, 25–45.
- Dossey, L. (1989). *Recovering the soul*. New York: Bantam.
- Durkheim, E. (1951). *Suicide*. Glencoe, IL: The Free Press.
- Eddington, A. (1984). Defense of mysticism. In K. Wilbur (Ed.), *Quantum questions: Mystical writings of the world's great physicists* (pp. 194–208). Boston: New Science Library.
- Gelderloos, P., Cavanaugh, K. L., & Davies, J. L. (1990). The simultaneous transfer function analysis of U.S.-Soviet relations, 1979–1986: A test of the Maharishi Effect. In *Proceedings of the American Statistical Association, Social Statistics Section*. Alexandria, VA: American Statistical Association.
- Gelderloos, P., Frid, M. J., & Xue, X. (1989). Improved U.S.-Soviet relations as a function of the

MIU WORLD PEACE CONFERENCE PROCEEDINGS
CONFLICT RESOLUTION THROUGH THE MAHARISHI EFFECT

- number of participants in the collective practice of the TM-Sidhi program. [Abstract insert]. *Journal of the Iowa Academy of Science*, 96(1), A33.
- Hagelin, J. S. (1987). Is consciousness the unified field? A field theorist's perspective. *Modern Science and Vedic Science*, 1, 29–87.
- Hagelin, J. S. (1989). Restructuring physics from its foundation in light of Maharishi's Vedic Science. *Modern Science and Vedic Science*, 3, 3–72.
- Hagelin, J. S. (1990). Unified field based economics. *Modern Science and Vedic Science*, 4, 73–95.
- Hagelin, J. S. (1992). Achieving world peace through a new science and technology. *Modern Science and Vedic Science*, 5, 48–75, in this issue.
- James, W. (1977). *Human immortality: Two supposed objections to the doctrine*. Boston: Houghton Mifflin. (Original work published 1898)
- Jeans, J. (1943). *Physics and philosophy*. New York: Dover.
- Jöreskog, K. G., & Sörbom, D. (1979). *Advances in factor analysis and structural equation models*. Cambridge, MA: Abt Books.
- Jöreskog, K. G., & Sörbom, D. (1986). *LISREL user's guide, version VI*. Mooresville, IN: Scientific Software.
- Klein, D. B. (1984). *The concept of consciousness: A survey*. Lincoln: University of Nebraska Press. (Reference cited is facing the book title page.)
- Larimore, W. E. (1983). Predictive influence, sufficiency, entropy, and an asymptotic likelihood principle. *Biometrika*, 70, 175–181.
- Larimore, W. E. (1986). *Development of statistical methods using predictive inference and entropy*. (Technical Report SSI-S112). Cambridge, MA: Scientific Systems.
- Larimore, W. E., & Mehra, R. K. (1985). The problem of overfitting data. *Byte*, 10, 167–180.
- Long, J. S. (1983). *Covariance structure models*. Beverly Hills, CA: Sage.
- Maharishi Mahesh Yogi. (1963). *Science of Being and art of living: Transcendental Meditation*. New York: Signet.
- Maharishi Mahesh Yogi. (1967). *On the Bhagavad Gita: A translation and commentary, Chapters 1–6*. Baltimore: Penguin/Arkana.
- Maharishi Mahesh Yogi. (1972). *The Science of Creative Intelligence: Knowledge and experience* [Course syllabus]. Los Angeles: Maharishi International University Press.
- Maharishi Mahesh Yogi. (1975). *Inauguration of the Dawn of the Age of Enlightenment*. Rheinweiler, W. Germany, Maharishi International University Press.
- Maharishi Mahesh Yogi. (1976). *Creating an ideal society*. Rheinweiler, W. Germany: Maharishi European Research University Press.
- Maharishi Mahesh Yogi. (1979, January). The dawn of world peace. *World Government News*, pp 4–7, 38.
- Maharishi Mahesh Yogi (1986a). *Life supported by natural law*. Washington, DC: Age of Enlightenment Press.
- Maharishi Mahesh Yogi. (1986b). *Maharishi's program to create world peace: Removing the basis of terrorism and war*. Washington, DC: Age of Enlightenment Press.
- Miller, J. (1992). Trouble in Mind. *Scientific American*, 267 (3), 180.
- Orme-Johnson, D. W. (1988a). The cosmic psyche—An introduction to Maharishi's Vedic Psychology: The fulfillment of modern psychology. *Modern Science and Vedic Science*, 2, 113–163.
- Orme-Johnson, D. W. (1988b). The cosmic psyche as the unified source of creation: Verification through scientific principles, direct experience, and scientific research. *Modern Science and Vedic Science*, 2, 165–221.

- Orme-Johnson, D. W., Alexander, C. N., & Davies, J. L. (1990). The effects of the Maharishi Technology of the Unified Field: Reply to a methodological critique. *Journal of Conflict Resolution*, 34, 756–768.
- Orme-Johnson, D. W., Alexander, C. N., Davies, J. L., Chandler, H. M., & Larimore, W. E. (1988). International peace project in the Middle East: The effect of the Maharishi Technology of the Unified Field. *Journal of Conflict Resolution*, 32, 776–812.
- Orme-Johnson, D. W., Cavanaugh, K. L., Alexander, C. N., Gelderloos, P., Dillbeck, M. C., Lanford, A. G., & Abou Nader, T. M. (1990). The influence of the Maharishi Technology of the Unified Field on world events and global social indicators: The effects of the Taste of Utopia Assembly. In R. A. Chalmers, G. Clements, H. Schenkluhn, & M. Weinless (Eds.), *Scientific Research on Maharishi's Transcendental Meditation and TM-Sidhi Program: Collected Papers* (Vol. 4). Vludrop, the Netherlands: Maharishi Vedic University Press.
- Orme-Johnson, D. W., & Dillbeck, M. C. (in press). Higher states of collective consciousness: Theory and research. In J. Gackenbach, C. N. Alexander, H. T. Hunt (Eds.), *Higher states of consciousness: Theoretical and experimental perspectives*. New York: Plenum Press.
- Orme-Johnson, D. W., Dillbeck, M. C., Alexander, C. N., Chandler, H. M., & Cranson, R. W. (1989). Time series impact assessment analysis of reduced international conflict and terrorism: Effects of large assemblies of participants in the Transcendental Meditation and TM-Sidhi program. Paper presented at the 85th annual meeting of the American Political Science Association, Atlanta, GA.
- Orme-Johnson, D. W., Dillbeck, M. C., Bousquet, J. G., & Alexander, C. N. (1990). The World Peace Project of 1978: An experimental analysis of the application of the Maharishi Technology of the Unified Field in major world trouble spots: In R. A. Chalmers, G. Clements, H. Schenkluhn, & M. Weinless (Eds.), *Scientific Research on Maharishi's Transcendental Meditation and TM-Sidhi Program: Collected Papers* (Vol. 4). Vludrop, the Netherlands: Maharishi Vedic University Press.
- Orme-Johnson, D. W., & Farrow, J. T. (Eds.). (1977). *Scientific research on the Transcendental Meditation program: Collected papers* (Vol. 1). Rheinweiler, W. Germany: Maharishi European Research University Press.
- Orme-Johnson, D. W., & Gelderloos P. (1988). Topographic EEG brain mapping during “yogic flying.” *International Journal of Neuroscience*, 38, 427–434.
- Orme-Johnson, D. W., Gelderloos, P., & Dillbeck, M. C. (1988). The long-term effects of the Maharishi Technology of the Unified Field on the quality of life in the United States (1960–1984). *Social Science Perspectives Journal*, 2(4): 127–146.
- Travis, F., & Orme-Johnson, D. W. (1990). EEG coherence and power during yogic flying: Investigating the mechanisms of the TM-Sidhi program *International Journal of Neuroscience*, 54, 1–12.
- Wallace, R. K., Orme-Johnson, D. W., & Dillbeck, M. C. (Eds.). (in press). *Scientific Research on Maharishi's Transcendental Meditation and TM-Sidhi program: Collected papers* (Vol. 5). Fairfield, IA: Maharishi International University Press.
- Yoga sutras of Patanjali*. (1978). (R. Prasada, Trans.). New Delhi: Oriental Books Reprint Corporation. (Original work published 1912)

Discussion

John Hagelin, Maharishi International University. In addition to the interesting scientific and philosophical implications of the discovery of the unified field and its connection to consciousness, it also has direct practical implications for the creation of world peace. We have a technology now that has been used on numerous consecutive occasions, and which, for example, has been shown to reduce violence and war deaths in the Middle East by more than 80%. With the availability of such a technology, where a relatively small group of people can reduce violence to such a degree, and with a combined statistical significance of greater than nine standard deviations (which means there is less than one part in 10 million trillion that this phenomenon is due to chance), we have a clear responsibility to educate the political and the academic leadership about it. It is irresponsible today not to augment the existing approaches to peace with this new scientifically validated technology which has demonstrated its ability to create a harmonious and coherent atmosphere that can insure the success of all other conventional approaches to world peace.

Question from the audience: If the paradigm of the Maharishi Effect becomes popular among politicians, and everybody is implementing it, what would be the role of other approaches to world peace?

David Orme-Johnson. Their role would continue because there will always be negotiations and dialogue between differing cultural groups. However, supported by coherence in collective consciousness, these efforts would be more successful and reach their goals. With the widespread acceptance of this paradigm and implementation of coherence-creating groups, life will be in peace and harmony, in full blossoming of cultural integrity, and prosperity and happiness for all. What is needed to make things work on the behavioral level is the enlivenment of the underlying field of coherent consciousness.

Andrés Liebenthal, Washington D.C. I was quite impressed, personally, by the evidence presented by Dr. Hagelin on the scientific explanation of the Lagrangian of the unified field and the evidence, presented by Dr. Orme-Johnson on the Maharishi Effect. I would be tempted to stand here and discuss at length the nature of both kinds of evidence, but I think the issue is deeper than that. The main issue that we face concerning world peace is that the scientific evidence appears to be convincing, at least to the layman, but the professional refuses to be convinced. This appears to be the case from the limited information I have about the reaction of the political scientists. It is always difficult for a new revolution to take place. In science, some revolutions take place, but some of them die unborn.

Let me suggest to you that really what the profession thinks is not that important. If the business of this new institute is to make peace in the world, then one should focus on making peace, rather than convincing the professional economists, political scientists, and whomever of the legitimacy of the theory and technology. The Institute of World Peace provides an opportunity to do that in a setting that is separate, at least structurally, from an academic environment where more rigorous rules apply. Let me propose that the focus of the institute should be on convincing the decision-makers, rather than convincing the scientists.

Convincing the decision-makers happens to be my full-time job. And it is also very difficult to do. In my current position in the World Bank, I really have to talk to government decision-makers and try to get them to do things in a way different from the way they are doing things now—hopefully in a better way. There is very little science to it. It is more of an art and a lot of taking advantage of opportunities. But in my experience, classically, decision-makers like to go with things that have been proven to work well. They like to do what others have done. They like to see what was successful in other places. So somehow, one needs to create good examples that one can point to where the Maharishi Effect has worked. This requires change in the academic discipline. As a scientist, one is looking for objectivity; one doesn't want to tamper with the evidence. In trying to influence decision-makers, one has to tamper with the evidence, and by that I do not mean change the statistical significance or some such thing, but promote the evidence in a more enthusiastic manner, in a more anecdotal manner. The institute provides an opportunity to shed some of the academic rigor and to think more in terms of lobbying, of changing the minds of decision-makers, who are really the people who count.

David Orme Johnson, Maharishi International University. I would like to thank Dr. Liebenthal for his constructive comments on some things the Institute of World Peace should be doing, and to say that the first point he made, that we should be involved in creating world peace rather than trying to convince people, is definitely the major goal. At the end of this conference we will have a presentation on that. The business community of meditators, here in Fairfield, has taken on the responsibility of creating world peace. They have undertaken to build the Maharishi Center for Perfect Health and World Peace, which will provide the housing and economic base for maintaining a permanent group of 7,000 peacemakers in this community. We scientists and academics are standing on the sideline cheering them on, and then we will do studies on what they are doing. In the meantime, we are trying to create a larger understanding in the world of the mechanics of the Maharishi Effect.