INTRODUCTION TO VOLUME 5

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MAHARISHI'S MASTER PLAN TO CREATE HEAVEN ON EARTH AND SCIENTIFIC RESEARCH ON MAHARISHI'S TRANSCENDENTAL MEDITATION AND TM-SIDHI PROGRAM

Overview of Volume 5

his is the fifth volume of Scientific Research on Maharishi's Transcendental Meditation and TM-Sidhi Program: Collected Papers. Maharishi's Transcendental Meditation (TM) and TM-Sidhi program is the practical aspect of Maharishi's Vedic Science—the revival in this scientific age by His Holiness Maharishi Mahesh Yogi of the ancient Vedic wisdom of India.

Maharishi defines his Vedic Science as the science of the Ved, or pure knowledge (Maharishi Mahesh Yogi, 1985). It is the theoretical and practical knowledge of how the unified field of natural law, through its own self-referral nature, gives rise to all the laws of nature and to the entire universe, and of how knowledge and experience of this field can be applied to create Heaven on Earth for the whole humanity. Transcendental Meditation is the simple, natural, effortless technique Maharishi revived from Vedic knowledge to give any individual direct experience of this unified field as his own Self; the TM-Sidhi program enlivens this unified field in one's awareness, developing the ability to fulfill desires effortlessly and gain full support of natural law.

This volume includes 75 research papers and covers the years 1984 to 1989. The research presented in this volume extends and deepens the insights gained from research in previous volumes, in a wide range of physiological, psychological, and sociological studies. Its unique contribution to scientific knowledge is, first, to provide in the research on the Maharishi Effect an understanding of the cause of the outbreak of peace on earth in 1988, and for other positive global trends in the direction of the creation of Heaven on Earth; and second, to profoundly explore the theoretical basis in Maharishi's Vedic Science for this and the other unique findings of the scientific research on Maharishi's Transcendental Meditation and TM-Sidhi program.

The era covered by this volume begins with the world's first assembly of 7,000 experts in the Transcendental Meditation and TM-Sidhi program—the Taste of Utopia Assembly at MIU in the winter of 1983-84—and concludes with the outbreak of peace on earth in 1988-89, and with Heaven on Earth on the horizon of the world.

Volume 4 of the Collected Papers concluded with the findings of the global effects of the Taste of Utopia Assembly—the first evidence that a relatively small group of people practicing the Transcendental Meditation and TM-Sidhi program (7,000 people, approximately equivalent to the square root of 1% of the world's population) together in one place could positively influence the whole world. Orme-Johnson et al. and Cavanaugh et al. lodged public predictions in advance of the Assembly that during the three weeks of its duration there would be measurable changes in the trends of life on a global scale, which would be inexplicable on the basis of the normal cyclical trends of the data collected. These predictions were found to be fulfilled. Among the findings were: increased positivity of events in situations of international conflict, simultaneous increase of major stock market indices, decreased incidence of infectious diseases, reduced crime totals, and decreased traffic fatalities. This effect has come to be known as the Maharishi Effect, in honor of His Holiness Maharishi Mahesh Yogi—the founder of the Transcendental Meditation and TM-Sidhi program—who predicted it in the early 1960s. This effect is also known as the "Super Radiance Effect," after a similar effect in physics in which a small number of elements of a system functioning coherently can spontaneously induce coherence in the whole system (Hagelin, 1987).

This volume contains eight important papers that confirm the validity of the Maharishi Effect on the city, state, provincial, national, and global levels, which have been published in prestigious scientific journals in the last several years. Since the Taste of Utopia there have been two other assemblies with 5,000-plus participants and globally measurable effects. These findings have been so extraordinary that they inspired Maharishi to formulate and implement a program for world peace, including the first demonstrations of the TM-Sidhi Yogic Flying technique—the most powerful of the TM-Sidhi techniques—to dramatize the existence of a scientifically validated technology for the creation of world peace. All the years since 1984 have seen Maharishi primarily engaged in the implementation of this program, particularly through the creation of a permanent group of 7,000 in India to make the "Taste" of Utopia into a perpetual utopian reality for all humanity, which Maharishi describes as "Heaven on Earth." The success of his efforts is already being seen in the outbreak of peace on earth.

Maharishi feels, however, that world peace is not enough, that it is only the first step to a heavenly and ideal life for humanity. Much more is needed if humanity is to experience fulfillment. Disease must be eliminated and poverty must be eradicated. The environment must be pure and free from pollution and poison. Everyone must be adequately housed and abundantly fed. And education must provide the knowledge which will enable any individual to enjoy the fruit of all knowledge—a life spontaneously in accord with natural law and therefore free of mistakes and problems—a life of fulfillment. By "Heaven on Earth" Maharishi means all these things together—a state of life where everyone experiences "the world is my family" and "I am living in heaven."

This volume includes a variety of research studies deepening our understanding of the effects and the mechanism of the Transcendental Meditation and TM-Sidhi program, and reviews studies which, surveying all the research published over the past 20 years, strongly establish the uniqueness of the effects of Transcendental Meditation in comparison to normal rest and other programs of self-development. These studies demonstrate that the TM and TM-Sidhi program has unique beneficial effects on its practitioners' metabolism, on their biochemistry, on their cardiovascular system, on the electrical activity of their brains, and on the quality of their sleep. It enhances intelligence, learning, and academic performance in students at all levels; develops the personality—including improving moral reasoning; decreases anxiety and reactivity to stress; effectively rehabilitates prisoners; increases business productivity and job satisfaction; markedly reduces incidence of all major categories of disease; reduces health care utilization; slows or reverses aging; improves mental capabilities of the elderly; and enriches the quality of family life. Research covers all stages of life, from newborn babies to the elderly, and includes studies on the individual, family life, corporations, schools, cities, nations, and the world as a whole. These research papers, together with all the previous studies on the Transcendental Meditation and TM-Sidhi program, provide strong support to Maharishi's contention that Heaven on Earth is entirely practical at this moment in history.

It is the 430 research papers in Volumes 1–5 of the Collected Papers, along with the growing experience of heavenly life of over three million practitioners of TM throughout the world, that gave Maharishi a scientific foundation on which to formulate and inaugurate, in 1988, his Master Plan to Create Heaven on Earth. Maharishi's Master Plan to Create Heaven on Earth contains descriptions of all the programs Maharishi has designed to reconstruct the world by glorifying the inner and outer life of mankind, including his World Plan for Perfect Health (1985) and his Program to Create World Peace (1986). Maharishi's Master Plan calls for the glorification of inner life through the Transcendental Meditation and TM-Sidhi program, and the glorification of outer life through programs of Maharishi's Vedic Science to build ideal villages, towns, and cities, and to create abundant food supplies, eradicate poverty, eliminate global economic imbalance, achieve invincible defense, and create ideal education and perfect health.

During these years, while the scientific research on the TM and TM-Sidhi program has accumulated at an ever-increasing rate, Maharishi has in addition accelerated the pace at which he is bringing to light the different branches of the ancient Vedic wisdom of India. He has done this to provide new technologies to create Heaven on Earth, and especially to provide new means for the outer glorification of life on earth.

Maharishi has remained in India from 1985 to 1989 at the World Capital of the Age of Enlightenment, Maharishi Nagar, where the principal group of 7,000 practitioners of the Transcendental Meditation and TM-Sidhi program is being organized. He thereby has been able to gather around him the greatest Vedic scholars of the age, analyzing their knowledge to see where incomplete or partial understandings of the Vedic disciplines have become predominant, or the foundation of the discipline in the unified field of natural law has become lost. In these few years a variety of Vedic disciplines and technologies have been brought to light by Maharishi, providing a crucial impetus to the fulfillment of his longtime goals to create world peace and to eliminate suffering in all its forms, so that the whole humanity can enjoy Heaven on Earth.

Maharishi has, for example, revived Maharishi Ayur-Ved for perfect health, Gandharv Ved

for individual and global harmony, Sthapatya Ved for the establishment of buildings and cities which promote life in accord with natural law, Jyotish to accurately predict future trends of life, and Yagya to avert dangers which have not yet come. Scientific research is also being conducted on many of these new technologies and this research is being published separately.

However, at the basis of all disciplines of Maharishi's Vedic Science is the experience of transcendental consciousness through Maharishi's Transcendental Meditation technique and its enlivenment through the TM-Sidhi program. Thus, the research in this volume remains fundamental to understanding the mechanics by which the technologies of all branches of Maharishi's Vedic Science can create Heaven on Earth.

This volume also contains a theoretical section of papers which explore the relationships between the understanding of nature in modern academic disciplines and the understanding provided in Maharishi's Vedic Science. These relationships are especially explicit in the field of physics, which has come to understand the existence of a unified field of all the laws of nature at the basis of all the forces and particles in the universe. Two papers by Hagelin argue convincingly that this unified field glimpsed by physics is identical with what was known to ancient Vedic sages (and can be known to a modern sage like Maharishi) as Samhita (the unified field) or Atman (the Self of all beings, the field of consciousness in its pure state). The conclusion of these papers is that the unified field, being a self-referral or self-interacting field, is indeed the field of consciousness in its pure or fundamental state, and hence can be applied by human beings through their own consciousness through the subjective technology Maharishi has revived in his Vedic Science—the Transcendental Meditation and TM-Sidhi program. This, Hagelin suggests, is the theoretical basis for the scientific findings in the five volumes of the Collected Papers, and the basis of the coming unified field based age for humanity—the age of Heaven on Earth.

Also included in the theoretical section are papers on Maharishi's Vedic Physiology; on the foundations of mathematics; on education, and rehabilitation; and five papers explaining how Maharishi's Vedic Psychology fulfills the theoretical and applied goals of psychology through experience and development of pure consciousness, the cosmic psyche.

In addition, the theoretical and review section includes a paper by Glaser that reviews recent research on the health-producing effects of the approaches of Maharishi Ayur-Ved. Several of these studies examine the effects of Maharishi Ayur-Ved rasayanas. Rasayanas are herbal or mineral preparations designed to optimize health, promote longevity, and treat specific disorders. These studies indicate that rasayanas, including a special formula known as Maharishi Amrit Kalash, produce physiological balance and biological integration. Other studies on Maharishi Panchakarma, a systematic set of purification procedures designed to prevent illness and promote longevity, show improvements on a range of mental and physical health measures.

The theoretical basis of all the effects of Maharishi's Transcendental Meditation and TM-Sidhi program has been elaborated in 1989 in a textbook for all educational levels from kindergarten to Ph.D., integrating all the principal academic disciplines, trades, and professions with Maharishi's

Vedic Science—demonstrating that all the activity in every conceivable field in the universe has its origin in the self-interacting dynamics of the unified field. This textbook emphasizes the practical importance of connecting all fields of life to the unified field of natural law in order to transform life to become Heaven on Earth. The application of the knowledge contained in this textbook in all the world's schools, colleges, and universities will, Maharishi anticipates, be instrumental in the creation of Heaven on Earth.

The five volumes of the Collected Papers, along with this textbook of Maharishi's Vedic Science based education, are companion volumes to Maharishi's Master Plan to Create Heaven on Earth, together providing the experimental and theoretical basis for the programs of the Master Plan designed by Maharishi to finally eliminate suffering from the life of our world.

Now we will explore in more detail each of the main developments in Maharishi's knowledge and programs which have been summarized in this overview of the years covered by Volume 5 of the Collected Papers.

The Maharishi Effect and the Creation of Heaven on Earth The Outbreak of Peace on Earth

War has proven to be the most intractable of human problems—and the most terrible. Peace treaties have repeatedly been broken throughout history, international organizations have proved powerless to prevent war, and the possession of large armies has never been demonstrated to avert disaster—indeed it could be argued to have often stimulated the outbreak of war.

It was all the more astonishing, therefore, that 1988 was described both by political leaders and by the media as the year that peace broke out on earth. This trend has continued into 1989, with every sign that the cold war between the two superpowers, which threatened the very survival of humanity, has now ended. Newsweek magazine described 1988 as the "Year of Miracles." On December 31, 1988, the Toronto Star stated, "There has been no year like it in this century," while on Christmas Day the Washington Post said, "The sound you hear this Christmas is a worldwide sigh of relief." The Wall Street Journal stated, "Peace is proliferating from Mideast to Asia," and the Economist headlined a cover story, "Oh, what a peaceful world." Georgi Arbatov, Director of Moscow's Institute for the Study of the U.S.A. and Canada, said in an interview with Time, "We are going to do something terrible to you [the U.S.A.]—we are going to deprive you of an enemy."

During 1989, the world has seen the reopening of ties of friendship between the U.S.S.R. and China after 30 years of armed confrontation. The Iron Curtain between Hungary and Austria is being dismantled. The Soviet Union has announced plans to reduce its defense budget by one third by 1995, and to convert 38,000 defense plants to the production of farm equipment and consumer goods. Both the U.S. and the U.S.S.R. have made significant proposals for massive reductions of their armed forces confronting each other in Europe. Commentators have remarked that suddenly

there now seems to be a competition, not in accumulating war machinery, but in who can take the greatest strides in peace-making. This great change has also been highlighted in the opening of the first Transcendental Meditation teaching institution in the Soviet Union—the Maharishi Institute of Ayur-Ved inaugurated on July 14, 1989, under the auspices of the Research Center for Preventive Medicine of the U.S.S.R.

What has been especially extraordinary about this historic phenomenon is that it is inexplicable to the leaders of the world. Mr. Gorbachev is reported to have asked the people of the Soviet Union if anyone could explain to him why these extraordinary changes were occurring, and President Ronald Reagan told reporters during the June 1988 summit in Moscow, "There is no way I can really explain how I came to be here."

This volume of the Collected Papers can in one sense be seen as the scientific answer to the mystery of the outbreak of peace on earth.

History of Maharishi Effect Research

The Maharishi Effect—the environmental influence of the practice of the Transcendental Meditation technique—had been well understood by 1984. In fact, the first four volumes of the Collected Papers include 23 scientific papers on the Maharishi Effect. This effect had been interpreted as a field effect of consciousness, in which the individual practitioners of Transcendental Meditation, by experiencing pure consciousness—the unified field of all the laws of nature—instantaneously spread coherent waves throughout the collective consciousness of a whole population. This, it was proposed, automatically elevated the level of coherence or orderliness in the functioning of the whole collective consciousness of the population, which in turn was reflected in increased positivity and harmony in the society, and declining negative trends such as crime, accidents, etc. (Orme-Johnson, Alexander, Davies, Chandler, & Larimore, 1988). This effect has been described since ancient times in India—for example in the expression of the Patanjali Yog Sutras (2.35)

Tat sannidhau vairatyagah

In the vicinity of Yog (union) hostile tendencies are eliminated.

The Maharishi Effect is a Profoundly Established Phenomenon

Since 1984 the research on the Maharishi Effect has gone through an unusually stringent review process from the scientific community, and has been published in prestigious scientific journals. In this period there has also been an increase in the variety of measures and settings utilized in the studies, and there has been repeated confirmation of the Maharishi Effect on a global scale. Finally, the level of statistical certainty has risen to a very high level. The net result is that the Maharishi Effect is now a securely established phenomenon, even when the most austere scientific standards are applied. With three million practitioners of Maharishi's Transcendental

Meditation program in the world, 80,000 practitioners of the TM-Sidhi program, and permanent groups of 3,500 TM-Sidhi Yogic Flyers at Maharishi Nagar, India, and 2,500 at Maharishi International University in the United States, there is a clear underlying cause for the outbreak of peace on earth, and a clear mechanism for the world to rise beyond world peace to that quality of collective life on earth which could be described as Heaven on Earth.

The study by Orme-Johnson, Alexander, et al. included in Volume 4 of the Collected Papers (Paper 333) and published in the *Journal of Conflict Resolution* in December 1988, was already a demonstration of the extremely high methodological standard to which research on the Maharishi Effect is now being held, and which it is successfully meeting. This study demonstrated that on days when attendance was high in group practice of the Transcendental Meditation and TM-Sidhi program in Israel there was a 71% average drop in war deaths in Lebanon. This article had been submitted two years earlier but the journal used an unusually lengthy and thorough review process because of the unprecedented nature of the study and its results. The editors and reviewers felt that if a different statistical method were used, this effect would disappear. Using the suggested method, however, the researchers found that the result was strongly supported. The journal finally decided to publish the article, preceded and followed by comments from the editor and a reviewer explaining that they had felt to publish this research on the strength of its methodology.

In this volume we see other papers which have met a similarly high standard of methodological rigor. Two papers by Dillbeck et al. (Papers 401 and 402) were the first Maharishi Effect research including the TM-Sidhi techniques as well as TM to be published in a major, refereed journal. These papers, published in The Journal of Mind and Behavior, study the effect of large groups practicing the TM and TM-Sidhi program together in one place on crime and quality-of-life variables. As with other Maharishi Effect research being reviewed for publication, the highly sophisticated statistical methodology of these papers caused the journal editors to have the research reviewed not only by sociologists but also by statisticians. Editors and reviewers were impressed by the use of open, public data, which by nature is free from any even unintentional bias on behalf of the investigator, and which also makes the studies completely open for replication. The fact that public predictions of results were made in advance of the studies also adds to their power. In addition, the Dillbeck et al. papers and other Maharishi Effect studies, such as the study of the effects of large assemblies of TM-Sidhas on the Lebanon war by Davies (Paper 410), make use of statistical methods for determining causation, such as transfer function analysis, impact assessment analysis, and causal modelling, which give strong evidence in favor of a causal interpretation of the Maharishi Effect. For example, the paper by Davies, presented in September 1989 to the American Political Science Association, found a 71% reduction in war deaths, a 68% reduction in injuries, and a 66% increase in cooperative events during the large assemblies of TM-Sidhas. The research found that the probability of this effect taking place by chance was far less than one in a million.

Another approach to studying the Maharishi Effect which is well-represented in this volume of the Collected Papers is the study of effects on the economy. In a series of papers (403-406), Cavanaugh has utilized the "misery index," the sum of a nation's inflation and unemployment, as a

new measure of the influence on the U.S. and Canada of the group practice of the Transcendental Meditation and TM-Sidhi program by over 1,600 people at Maharishi International University in Fairfield, Iowa, U.S.A. He has found that higher numbers practicing the Transcendental Meditation and TM-Sidhi program together in a group are associated with a decreased misery index, and that 54% or more of the total reduction in the misery index for the U.S. from 1980 to 1988 can be attributed to the Maharishi Effect—a very large and statistically significant reduction. Cavanaugh has employed increasingly rigorous statistical methods (using multivariate time series analysis) to control for the influence of other major economic factors which could have affected the misery index, such as monetary growth, rate of change of energy and raw materials, and business cycle fluctuations. These studies on the misery index have not only broadened the variety of measures of the Maharishi Effect, but their extreme thoroughness and methodological strength have been a very convincing demonstration of its extraordinary power.

Included in all these Maharishi Effect papers, and others in this volume, are studies on the Maharishi Effect in the cities of New Delhi, Washington, D.C., and Manila; in the state of Rhode Island; in the Commonwealth of Puerto Rico; in the countries of the United States, Canada, Lebanon, and Israel; and in the world as a whole. The variety of measures used—including crime levels, homicide rates, mortality rates, traffic fatalities, pollution, alcohol and cigarette consumption, inflation and unemployment, U.S.-Soviet relations, and levels of international violence and conflict—and the strong effects created in these diverse areas indicate that a very fundamental mechanism of nature is at work with a broad influence at all levels of human life.

The Maharishi Effect Transforming Our Understanding of Human Life

The dilemma that faces the scientific leaders of this age is that the very methods that are at the basis of all their research are lending support to the solutions offered by the ancient Vedic sages to the most difficult problems which modern science has been unable to solve. The objective methods of modern science are supporting the effectiveness of Maharishi's Vedic Science based approach to solving the problem of war, and other previously insoluble human problems.

This dilemma is in the process of creating a shift in the intellectual paradigm of our age—the most significant one in scientific history, since its practical effects on human life will be the greatest. The scientific research in all five volumes of the Collected Papers is the actual accumulation of evidence concerning the experience of pure consciousness and its effects, which has created the necessity of a paradigm shift. Fortunately this paradigm shift should be quite painless, since there is a clear theoretical explanation of these effects in Maharishi's Vedic Science, and since the practical outcome of this transformation will be Heaven on Earth.

Maharishi's Program to Create World Peace

Inspired by the successful creation of the Maharishi Effect and by the urgent necessity to bring a resolution to existing wars, terrorism, and the dangerous rivalry of the superpowers, Maha-

rishi in 1986 formulated his Program to Create World Peace (Maharishi Mahesh Yogi, 1986) and inaugurated 1987 as his Year of World Peace, and 1988 as his Year of Achieving World Peace. Maharishi's Program to Create World Peace called for the creation of a group of 7,000 individuals (approximately the square root of 1% of the world's population) practicing the Transcendental Meditation and TM-Sidhi program together in one place, and for the establishment of a fund of \$100 million (the Maharishi World Peace Fund) to support this world peace—creating group. In addition, Maharishi's program called for groups of practitioners of the TM and TM-Sidhi program, equivalent in number to the square root of 1% of the population, for each continent, each nation, and each city in the world.

To bring to the attention of world leaders the existence of a technology to create world peace, Maharishi in 1986 arranged for the first public demonstrations of the TM-Sidhi Yogic Flying technique. On July 9, 1986, the first North American Continental Yogic Flying competition was held at the Convention Center in Washington, D.C., attended by some 100 media organizations, followed by the first International Yogic Flying Competition before 10,000 people at the Indira Gandhi Stadium in New Delhi, India, on July 21, 1986. Then on August 15, TM-Sidhi Yogic Flyers demonstrated for the press and leaders of their nations in 1,000 cities around the world. Yogic Flying competitions are now held annually at the family, city, state, national, continental, and international levels (Maharishi's Programme to Create World Peace, 1987).

During the first Yogic Flying competitions, research—now included in this volume (Paper 375)—was presented on the electroencephalographic changes during Yogic Flying, demonstrating that there is a distinctive EEG pattern during practice of this technology compared to normal physical activity. This pattern includes higher relative alpha power and increased EEG coherence at the moment when the body lifts off the ground during practice of the Yogic Flying technique.

Paper 422 in this volume provides a complete review of the theoretical principles and empirical support for Maharishi's Program to Create World Peace which have been described above.

The Maharishi Effect as Experimental Confirmation of the Existence of the Unified Field

The results on the Maharishi Effect and the phenomena of the TM-Sidhi program may also be understood as the only experimental verification so far in the history of modern science for the existence of the unified field of all the laws of nature. In fact, the subjective methodologies of Maharishi's Vedic Science may be seen as the only practical techniques to apply the infinite organizing power of the unified field, and thereby to create measurable individual and societal effects which are objective demonstrations of the existence of this underlying field.

In 1987, Maharishi International University began to publish a new journal, Modern Science and Vedic Science, dedicated to exploring the correlations between the conclusions of modern

scientific disciplines and Maharishi's Vedic Science. In the first issue of this journal, Hagelin, in his theoretical article, "Is Consciousness the Unified Field?" (Paper 429) concluded that the unified field of physics and the unified field of Vedic Science are in fact identical:

We have observed a striking correspondence between structural aspects of this experience [of pure consciousness] and the physical structure of natural law at fundamental scales. The most straightforward interpretation of these experiences, of the Super Radiance data, and of the Sidhis phenomena is that the unified field that has become the primary focus of modern theoretical physics and the unified field of consciousness are identical. (Hagelin, 1987, p. 80)

Inspired by this identity of the unified field of physics and the unified field of consciousness, Hagelin, in his second paper in this volume, proposes to restructure physics from its unified basis in Maharishi's Vedic Science. He proposes a new language and terminology of physics in which the elementary particles—the fundamental modes of the unified field—are named for the specific vibrational states of the field to which they correspond. At the same time he explores the unique nature of the Vedic names of these basic levels of creation. The new approach presented in this paper represents the beginning of a complete revolution in the understanding of physics. Hagelin includes in his discussion reflections on the implications for society of a fully developed science and technology of the unified field, made possible through the integrated subjective and objective approach of Maharishi's Vedic Science and its applied, experiential technologies.

The unified field theories of modern physics face the challenge that the level of the unified field is millions of times greater in energy than the energies that can be created even in the largest conceivable particle accelerators on earth. Thus the unified field is not directly accessible to the experimental methods of physics.

Maharishi points out that this problem exists in physics because its methods are solely objective, excluding the subjective approach to gaining knowledge utilized in his Vedic Science—the Transcendental Meditation and TM-Sidhi program.

Maharishi's Vedic Science: Knowledge and Experience of the Unified Field of All the Laws of Nature for the Creation of Heaven on Earth

Maharishi and All the Vedic Sages Discover and Utilize the Unified Field through Research in Their Own Consciousness

As Hagelin remarks in the above quotation, the correspondences between the analysis of the fundamentals of creation by modern physics and Maharishi's Vedic Science are extraordinarily precise (see also Paper 430). Weinless also, in Paper 428, finds that there is a precise correspondence between the foundation of mathematics and the unified field—the self-interacting dynamics of consciousness described by Maharishi's Vedic Science.

In other words, centuries of theoretical and experimental research have only in recent years reached conclusions available to the Vedic sages thousands of years before. This raises the question: How did the Vedic sages know this unified field? Maharishi's answer is that they knew it solely through their own research in consciousness, through the subjective methodologies of their Vedic tradition, most particularly the Transcendental Meditation and TM-Sidhi program.

How could such subjective technologies uncover the existence and the self-interacting dynamics of this basic field, considered the fundamental objective field in the universe? According to Maharishi's Vedic Science, it is possible because the unified field is consciousness—an unbounded ocean of consciousness (Maharishi Mahesh Yogi, 1985, p. 59). In this view consciousness is not an epiphenomenon of matter, but matter is an epiphenomenon of consciousness. Consciousness is primary, and matter is secondary. It is further held that human consciousness is a wave of that unbounded ocean of consciousness, and that with the use of the proper mental techniques, sages are able to experience the individual wave of their consciousness settling down to its silent, least excited state. They can thereby experience their individual consciousness as identical with the unbounded ocean of consciousness, finding it to be an infinite, unmanifest field, transcendental to everything in the universe. In this way the ancient sages discovered the unified field, and were able with practice to explore its structure and internal dynamics, and even to experience the mechanics by which the unified field, through its self-interacting dynamics, gives rise sequentially to all the laws of nature which are responsible for the whole creation. This alone explains the Vedic sages' knowledge in antiquity of the unified field which has been the ultimate quest of modern science, and will be the fulfillment of the whole modern scientific tradition.

This experience of the unified field and its self-interacting dynamics has been gained in modern times by Maharishi, and by his Master, His Divinity Swami Brahmananda Saraswati, Jagadguru Bhagavan Shankaracharya of Jyotir Math in the Himalayas. And through Maharishi's revival of the Transcendental Meditation and TM-Sidhi program, this experience has become accessible to millions of people throughout the world. The power of this knowledge to improve all areas of practical life is amply documented in the five volumes of the Collected Papers.

A New Paradigm of Gaining Knowledge—Use Both the Objective and Subjective Approaches through Maharishi's Vedic Science

This experience of the unified field and its demonstrated benefits in itself suggests an entirely new paradigm of gaining knowledge, involving not just the objective methods of modern science, but the integrated approach of Maharishi's Vedic Science, including both the subjective and objective approaches (Chandler, 1987). Only the integrated approach of Maharishi's Vedic Science offers direct knowledge of the most fundamental field of the universe, the unified field, and therefore only this approach offers complete knowledge of creation.

Hagelin also points out that this Vedic knowledge of creation is not just an intellectual construct for the enjoyment of a scientific elite, with no practical application for humanity, as is the

case with the objective approach to the knowledge of the unified field. In fact, the direct experience of this field gives the opportunity to apply this field to create Heaven on Earth. This is actually the fundamental point of Maharishi's Vedic Science. The Maharishi Effect is just such an example of the application of the unified field for the benefit of mankind. This phenomenon, where a group of practitioners of the TM and TM-Sidhi program is able to create a positive influence on thousands or even millions of people at a distance from the group, is, according to Hagelin, understandable only as an effect produced from the level of the unified field itself—through the interaction of the group with the unified field on the level of their experience of transcendental consciousness (see Papers 401–411).

Maharishi's purpose in all his activities is to inform the world that the application of this field is the solution to the abiding problems and misery of mankind, which have not been resolved by modern scientific technologies and which modern technologies have in many instances unfortunately exacerbated. Through research on the Transcendental Meditation and TM-Sidhi program, modern science has used its own objective methods of gaining knowledge to at long last discover a means of creating balance and holistic development in life.

The Master-Key Verse of the Rik Ved

Maharishi has located in one expression from the Vedic literature the essential knowledge about the benefits to human life of directly experiencing the unified field. Rik Ved, the principal of the four aspects of the Ved (basic texts of the Vedic literature), describes its own reality and its practical usefulness in what Maharishi has described as the master-key verse of the whole Vedic literature:

Richo akshare parame vyoman Yasmin deva adhivishve nisheduh Yastanna ved kimricha karishyati Ya ittadvidus ta ime samasate

The verses of the Ved are structured in the collapse of fullness in the transcendental field, selfreferral consciousness, the Self,

In which reside all the devas, the impulses of creative intelligence, the laws of nature responsible for the whole manifest universe.

He whose awareness is not open to this field, what can the verses accomplish for him? Those who know this level of reality are established in evenness, wholeness of life.

(Rik Ved 1.164.39)

This verse first describes the mechanics of the emergence of creation, and then the practical teaching of the Vedic literature for the fulfillment of human life.

The Collapse of Fullness—the Self-Interacting Dynamics of the Unified Field

Maharishi explains that the "collapse of fullness" describes the self-interacting dynamics of the unified field—the completely self-referral nature of the unified field (Maharishi Technology

of the Unified Field, 1984, pp. 16-17). The unified field, being pure consciousness, he explains, is awake in itself, and being awake it becomes aware of itself—it knows itself. Knowing itself, it knows its own complete range from fullness (its infinite value) to its own point (infinitesimally small value). This is the collapse of fullness—and this is the basis of the whole creation.

In knowing itself, the field begins to play the role of knower, process of knowing, and known. In the Vedic language these are known as Rishi (the knower), Devata (the process of knowing), and Chhandas (the known), while their unified value is known as the Samhita. Now, Maharishi says, we have three values—Rishi, Devata, and Chhandas—and the one unified state of the three, the Samhita:

Here we have one and three at the same time. When we have one and three together in that self-referral state of pure consciousness, there is that infinite contraction for remaining one and there is that quick expansion to become three. When they are simultaneously three and one there is infinite dynamism. . . . In this togetherness of one and three, we find infinity pulsating—infinity pulsating in that state of pure awareness where the awareness knows its own unboundedness. (Maharishi Mahesh Yogi, 1985, p. 65)

Maharishi goes on to explain that this infinite dynamism produces rhythmic vibrations in the field, and these vibrations produce an "unmanifest noise," and this noise is the sound of the Ved. These sounds of the Ved are the primordial sounds of creation—the laws of nature at the basis of the whole universe. The Ved can thus be understood as the sound of the unified field whispering to itself, as it interacts with itself; and the sounds of the Ved are the laws of nature vibrating within the unified field.

Study of the Ved is Not in the Books

In Maharishi's analysis, the Ved has been very badly misinterpreted as a set of books. The study of the Ved, he says, is not in the books. In fact, according to the Masters of the Vedic tradition, the Ved is eternally inscribed in the unified field—that is to say, it is inscribed in the pure consciousness of each one of us. Through Maharishi's Transcendental Meditation and TM-Sidhi program we can experience pure consciousness and, through regular practice of these techniques, grow to be permanently established in pure consciousness. In this fully awakened consciousness the Vedic sounds zoom forth, they are heard reverberating within our own awareness. The Ved is:

... a beautiful, sequentially available script of nature in its own unmanifest state, eternally functioning within itself, and, on the basis of that self-interaction, creating the whole universe and governing it. That self-interacting process, that hum, that clear whisper, that clear rhythm, that clear vibration—that has been heard by the fully awakened consciousness. (Maharishi Mahesh Yogi, 1985, p. 64)

The Richo Akshare verse of Rik Ved describes this reality. All the verses of the Ved arise

from the collapse of fullness—the self-interacting dynamics of the unified field (richo akshare). And where does this occur? It occurs, the Rik Ved says, in the transcendental field itself (parame vyoman). And in this field reside all the impulses of creative intelligence (yasmin deva), which are responsible for the whole creation (adhivishve nisheduh). This is in essence the Vedic analysis of creation, which has arisen through the subjective approach to gaining knowledge.

In addition, this verse of Rik Ved asks: yastanna ved—he whose awareness is not open to this field, who does not experience this unified field level of creation, kimricha karishyati—what can the verses of the Ved accomplish for him? Maharishi explains that the verses of the Ved written in the book or recited by the Vedic pandits of India are not the reality of the Ved at all—that the reality of the Ved is inscribed in pure consciousness. Unless they are known there in pure consciousness, the verses are as if dead, and their application to create desired beneficial effects for the individual and society is not possible.

On the other hand: ya ittadvidus—those who know this level of reality, this level of the unified field of all the laws of nature, ta ime samasate—they are established in evenness, in wholeness of life. Here, Maharishi indicates, is the injunction to transcend—to practice Transcendental Meditation and experience the reality of the unified field in the state of pure consciousness, and on this basis to rise to live in higher states of consciousness where the experience of the unified field is never lost at any time, whether one is waking, sleeping, or dreaming. This is a state of evenness, a state of wholeness of life, where ultimately, in unity consciousness, the pinnacle of human development, the individual experiences Aham Brahmasmi—"I am the totality" (Brihadaranyaka Upanishad 1.4.10)—the totality of the entire creation. Such enlightened individuals experience both the manifest and unmanifest levels of creation as expressions of their own Self, and are able to utilize the verses of the Ved, that is, the laws of nature in their fundamental state, to create any desired effect, including the creation of Heaven on Earth (Maharishi Mahesh Yogi, 1985).

These profound teachings of the Ved, as brought out by Maharishi, give a practical path for any human being—and any society or nation—to enjoy his full potential and live wholeness of life, and give also a detailed understanding of the deepest source of this wholeness of life in the unified, self-referral state of consciousness. It is just this practical unfoldment of human potential, and the study of its mechanics, that is being examined, measured, and quantified from many different angles in the scientific research presented in all the volumes of the Collected Papers.

The Bhagavad-Gita as the Commentary on the Richo Akshare Verse

Extending the analysis of the practical reality of Vedic knowledge described above, the 700 verses of the Bhagavad-Gita are explained by Maharishi to be elaborations of this master-key verse of the Rik Ved. Maharishi describes the Bhagavad-Gita as that one book which, as a commentary of the Ved, has complete knowledge in it. The Bhagavad-Gita, he has said, is one complete book of Vedic Science for theory and practice both, and the proof is that at the end of Lord

Krishna's discourse to Arjun in the Bhagavad-Gita, Arjuna's experience of the unified field of natural law is restored—he becomes established in pure consciousness and achieves enlightenment. All 700 verses of the Gita are explained by Maharishi to be the unified field, in the form of Lord Krishn, telling its own story, just as the *Richo Akshare* verse itself is the unified field telling its own story (Maharishi Mahesh Yogi, personal communication).

For example, the mechanics of creation unfolded in the first half of the Richo Akshare verse are expressed by Lord Krishn in the words,

Prakritim svam avashtabhya visrijami punah punah
Curving back upon myself, I create again and again.

(Bhagavad-Gita IX.8)

These words, Maharishi points out, are another way of describing those same self-interacting dynamics of the unified field responsible for the whole creation, embodied in the first half of the *Richo Akshare* verse. The practical teaching of the Ved unfolded in the second half of the *Richo Akshare* verse is expressed (Maharishi Mahesh Yogi, 1967) in Lord Krishna's injunction to Arjun,

Nistraigunyo Bhavarjun

Be without the three gunas, O Arjun.

(Bhagavad-Gita II.45)

That is to say, transcend, go beyond the field of activity and experience pure consciousness. Likewise all the 700 verses of the Gita can be understood as the elaboration of this one Vedic expression.

Maharishi has described the Bhagavad-Gita as the "textbook" of psychology; the series of papers on Maharishi's Vedic Psychology in this volume of Collected Papers (Papers 423-427) represents the first elaboration of Maharishi's Vedic Science as providing the fulfillment of the theoretical and applied goals of psychology.

One Book of Complete Knowledge from Kindergarten to Ph.D.

Maharishi also points out that all levels of creation are structured according to the same basic formula found in the Richo Akshare verse and elaborated in the Bhagavad-Gita. He has therefore suggested to the academic leaders of this age that it would be possible to locate the structure of every discipline and every theory of every discipline within the pattern of the Richo Akshare verse.

He has proposed the creation of a single volume, one book of complete knowledge, from kindergarten to Ph.D., based upon the text of the *Richo Akshare* verse. Teaching this one verse, he indicated, it will be possible to see the theories of all disciplines within that one expression. In response to this suggestion, the faculty of Maharishi International University in 1989 compiled 3,000

pages of text, including a complete primary and secondary curriculum for Maharishi Vedic Schools, fifty-eight courses relating trades and professions to Maharishi's Vedic Science as the core curriculum for Maharishi Vedic Colleges throughout the world, and a twenty-two chapter university textbook connecting Maharishi's Vedic Science to all major academic disciplines. The unifying theme of this whole textbook is the *Richo Akshare* verse.

Charts were prepared demonstrating that sixty trades, professions, and disciplines can be derived from the structure of the *Richo Akshare* verse, and more detailed charts were created for the different stages of primary and secondary education and for all the different theories in the major academic disciplines. This volume also included a chart laying out explicitly how the Bhagavad-Gita elaborates the *Richo Akshare* verse.

This volume was further enriched by sixty Unified Field Charts. The Unified Field Charts are a unique way, originally proposed by Maharishi, of presenting the structure of any trade, profession, or academic discipline. They graphically depict how all the parts of a particular area of life sequentially emerge from the unified field of all the laws of nature, clearly demonstrating also that this unified field is identical with the pure consciousness experienced by the tradesperson, professional, or student during Transcendental Meditation. The individual sees that all the different areas he is studying emerge from the unified field of all the laws of nature, which is his own Self. By illuminating the connectedness of any activity in the universe to the unified field, Maharishi points out that these charts awaken the students to the necessity of living their lives from the level of the unified field of all the laws of nature, so that their lives are spontaneously in accord with natural law and they enjoy the fruit of all knowledge, a life in fulfillment.

This volume, entitled All Fields of Knowledge in the Light of Maharishi's Vedic Science and Technology: Creating Heaven on Earth in All Disciplines, Professions, and Trades, through the Curricula of Maharishi Vedic Universities, Colleges, and Schools, provides not only a complete textbook of Maharishi's Vedic Science for all levels of education, but also a complete exploration of the theoretical basis for all the scientific findings in the five volumes of the Collected Papers.

The Collected Papers of Scientific Research and the One Book of Complete Knowledge from Kindergarten to Ph.D.— Companion Volumes to Maharishi's Master Plan to Create Heaven on Earth

With Scientific Research on Maharishi's Transcendental Meditation and TM-Sidhi Program: Collected Papers, this textbook of complete knowledge in the light of Maharishi's Vedic Science is a companion volume to Maharishi's Master Plan to Create Heaven on Earth. These books provide the basis in scientific principle and experiment for Maharishi's Master Plan to Create Heaven on Earth.

On January 12, 1989, while inaugurating his Year of Heaven on Earth, Maharishi said:

It's now time for the world to have new knowledge, because old knowledge has not proven effective. The world must have new knowledge in order to have a new level of life. The world cannot go on on the old level of living, where everyone is dangerous to every other man. It's the dawn of a new time, based on the waking up of new knowledge. I hesitate to use the expression, "new knowledge," because knowledge is never new. But the appreciation of it, the realization of it, the use of it will be new in this stress- and problem-ridden world. Therefore, here is an invitation to every man on earth, and to the head of every family and the head of every nation. I am fondly inviting everyone to take this knowledge of the totality of natural law and bring about a problem-free society, a disease-free society, a weakness-free society. Take these words to be believable and true, and establish Vedic Science based schools, colleges, and universities in your country. (Global satellite broadcast, 1989)

Maharishi points out with great force that the world we see around us today is the result of the kind of knowledge available in the world so far. While it was commonly presumed that scientific knowledge would eventually solve all the remaining problems of humanity, even the most scientifically advanced nations show no evidence of a resolution of their deepest human problems through scientific technologies. Ill health, crime, drug abuse, lack of safety of the population from attack from inside and outside the nation, pollution, lack of availability of pure and nourishing food free from poison, marital conflict, emotional disturbances, poverty, depressing housing and homelessness, and other problems have not been eradicated even in the mightiest science and technology based industrialized nations. In fact, problems such as air and water pollution, food contaminated with poisonous herbicides and pesticides, and the use of medicines with dangerous side-effects which often cause illness—these are uniquely the creation of the scientific age.

The approach of modern science to life on earth has not made life heavenly for us—and yet nothing is more desirable than the creation of Heaven on Earth, with an end to all weakness, suffering, and problems for every individual and every nation.

Maharishi points out that only a new seed yields a new crop—only new knowledge can produce a new level of life on earth. The Collected Papers of scientific research on the Transcendental Meditation and TM-Sidhi program are the evidence that such a new knowledge exists and works. And the textbook of Maharishi's Vedic Science based education from kindergarten to Ph.D. is the curriculum to put this knowledge to work in the life of every child and every adult to create Heaven on Earth. When receiving, on January 12, 1989, the first installment of this one book of complete knowledge in the light of his Vedic Science, Maharishi said:

I am so fond of this knowledge—the knowledge of Vedic Science mingled with the knowledge of modern science. My Vedic Science and modern science together are going to be the curriculum of these Vedic universities. This course of knowledge and program for action will be given to all students born on earth from this generation on, so that they understand the range of possibilities in their lives and move in the direction of living natural law, move to maintain Heaven on Earth in every generation. (Global satellite broadcast, 1989)

Maharishi's Master Plan to Create Heaven on Earth

On January 12, 1988, His Holiness Maharishi Mahesh Yogi inaugurated his Master Plan to Create Heaven on Earth at the World Capital of the Age of Enlightenment, Maharishi Nagar, India, with the philosophy, "Through proper education we can accomplish anything."

Maharishi defined Heaven on Earth as: on the individual level—perfect health, long life in bliss, and the ability to fulfill one's desires; and on the collective level—an indomitable influence of positivity, harmony, and peace on all levels of collective life, including family, community, nation, and the world. Heaven on Earth, Maharishi said, will mean perfection on every level of human life, life free from weakness and problems, life in the waves of fulfillment. It will mean a world in which everyone lives according to the ancient Vedic dictum, Vasudhaiv kutumbakam— "the world is my family," and everyone feels, "I am living in Heaven."

Maharishi described his Master Plan to Create Heaven on Earth as the fulfillment of his World Plan, inaugurated in 1972 to eliminate the age-old problems of mankind in this generation. In a booklet prepared for the inauguration, Maharishi speaks of his Master Plan as "the master-key to lay open all the hidden treasures of life on earth—all the treasures of the kingdom of Heaven on Earth—and secure them for all generations to come" (Maharishi's Master Plan to Create Heaven on Earth, in press). This, he said, was possible on the basis of his Vedic Science, which opens the main switchboard of the whole universe in human awareness. And he made it clear that his aspiration to create Heaven on Earth was not simply a pious hope, but a program soundly based and completely practical:

The strength of our aspiration to create Heaven on Earth lies in the memory of heavenly life enjoyed by the Vedic civilizations in ages past. The practicality of creating Heaven on Earth has been verified through the growing experiences of heavenly life on earth by millions of people throughout the world today, through the evidence of the growing Maharishi Effect—increasing coherence in world consciousness year after year, and through a wide range of scientific research on the Transcendental Meditation and TM-Sidhi program as the simple, natural means to develop higher states of consciousness, the proper ground for Heaven to be lived on earth.

Maharishi's Master Plan calls for the reconstruction of the whole world to glorify both the inner life and the outer life of every human being on earth. The chart on the following page, designed by Maharishi, summarizes the 1,500 pages of his Master Plan.

The Wide Variety of Scientific Research which Supports Maharishi's Master Plan to Create Heaven on Earth

In this introduction we have already discussed the growth of the Maharishi Effect research, and of the influence of the Maharishi Effect on world events, including the outbreak of peace on earth. Here we should add that this volume contains a variety of other research which also supports Maharishi's conviction that now is the moment, after millennia of human history, when Heaven on Earth can be the reality of life for the whole family of nations. The great variety of the findings

MAHARISHI'S MASTER PLAN TO CREATE HEAVEN ON EARTH

Reconstruction of the Whole World

INNER

OUTER

GLORIFICATION OF INNER LIFE

- Development of higher states of consciousness
- · Blossoming of noble qualities and bliss
- Gaining support of nature from within happiness, peace, and fulfilling progress through

MAHARISHI'S TRANSCENDENTAL MEDITATION and TM-SIDHI PROGRAM

the Practical Aspect of

MAHARISHI'S VEDIC SCIENCE

which develops all the seven states of consciousness in the individual, and develops a perfect man with the ability to employ natural law to work for him and achieve anything he wants.

The seven states of consciousness are:

- Waking—Jagrat Chetna
- · Dreaming-Swapn Chetna
- Sleeping—Sushupti Chetna
- Transcendental Consciousness—Turya Chetna
- · Cosmic Consciousness-Turyateet Chetna
- · God Consciousness-Bhagavat Chetna
- Unity Consciousness—Brahmi Chetna—
 awakening of the pure nature of consciousness to its own self-referral reality—the unified reality of the diversified universe—
 which renders individual life to be a lively field of all possibilities—infinite organizing power of the unified field of natural law spontaneously upholding individual life.

GLORIFICATION OF OUTER LIFE

- Building Ideal Villages, Towns and Cities, based on Maharishi Sthapatya Ved—the science of building in accord with natural law—to create a beautiful and healthy environment free of pollution, noise and stress so that everyone feels "I am living in Heaven."
- Creating Global Green Revolution—farming all the unfarmed lands in the world using the scientific principles of Maharishi Vedic Farming to produce naturally grown, healthy food to achieve food self-sufficiency in every country.
- Achieving global eradication of poverty and achieving economic self-sufficiency in every nation through Maharishi's programs to develop agriculture, forestry, mining, and industry in every country.
- Realizing Global Rural Development and Urban Renewal providing better living conditions for an integrated life of the rich and poor throughout the world.
- Achieving economic balance in the world family through Maharishi Global Trading.
- Achieving ideal education through Maharishi's Vedic Science, which offers the fruit of all knowledge to everyone—life free from mistakes and suffering.
- Achieving perfect health for everyone and every nation through prevention-oriented Maharishi Ayur-Ved.
- Achieving coherence, harmony, and balance in nature for everyone and every nation through Maharishi Gandharv Ved.
- Achieving invincible defense for every nation through Maharishi Dhanur-Ved, which will disallow the birth of an enemy.
- Achieving perfect government in every country modeled on nature's government, which silently governs through natural law from the unified level of all the laws of nature—the common basis of all creation, the unseen prime mover of life, eternally fully awake within itself and available to everyone on the level of one's own self-referral consciousness—transcendental consciousness.
- Achieving the rise of a supremely nourishing power in the world, which will unrestrictedly uphold the power of evolution in nature, eliminating all destructive tendencies and negative trends in the world.

As a result, every nation will lovingly own every other nation, and all nations together will nourish every nation—everyone and every nation in the world will enjoy Heaven on Earth.

mentioned below further confirms the fundamental nature of the mechanism at work during the practice of the Transcendental Meditation and TM-Sidhi program—that every area of life is transformed when the unified field, the underlying basis of all the diverse aspects of life, is enlivened in human consciousness, just as every branch and leaf of a tree becomes stronger when the sap is enlivened.

Physiological studies in this volume include a range of research examining the unique state of rest gained during the Transcendental Meditation technique; studies showing more efficient, stable control of the endocrine system in meditators; research on the cardiovascular system indicating lower blood pressure and normalization of functioning in hormone receptors controlling stress reactivity; and a study showing more normal health and reduced tendency for heart disease in very dynamic, active individuals ("Type A's") who practice TM. A section of papers on electrophysiological and electroencephalographic changes resulting from the Transcendental Meditation and TM-Sidhi program includes studies indicating a more settled physiological response during cognitively demanding tasks; increased order-producing activity of the brain during sleep; increased functional organization of the brain; and increased coherence during and outside TM practice, and during the TM-Sidhi Yogic Flying technique. Taken together, these studies show a remarkably comprehensive refinement of physiological functioning. These changes in the direction of greater physiological balance and efficiency in turn support the cognitive and emotional development that takes place among participants in the Transcendental Meditation and TM-Sidhi program.

For example in the field of education, papers in this volume give evidence of the effects of Maharishi's Transcendental Meditation and TM-Sidhi program in increasing creativity and intelligence, perceptual and motor speed, and reaction time; in creating higher levels of cognitive development in children; and in increasing overall academic achievement, math ability, reading ability, and work study skills. There is also evidence for the effects of the TM and TM-Sidhi program in increasing prosocial behavior in school children, increasing integration of moral values, increasing sense of well-being, and creating higher field independence and higher orientation towards positive values in life. Many of these studies were conducted at Maharishi School of the Age of Enlightenment and Maharishi International University, Fairfield, Iowa, U.S.A., showing, among the school students, high levels of achievement on national tests of academic performance (in addition to a high average level of performance, the performance of individual students increases after they become students at Maharishi School) and, among the university students, growth of intelligence parameters that do not usually increase after the age of 17 or 18.

Research on TM in business settings has shown improved job performance; increased efficiency, productivity, and job satisfaction; improved work and personal relationships; and reduced cigarette and liquor consumption. A particularly comprehensive study in correctional services has shown the unique effects of the Transcendental Meditation program in rehabilitating prison inmates and lowering prison recidivism—offering a solution to a particularly terrible problem of human civilization.

In the field of health, an especially significant study, by Orme-Johnson (Paper 378), looked at 2,000 practitioners of Transcendental Meditation over a five-year period, and found a 50% reduction in both inpatient and outpatient medical care utilization compared to controls

matched for age, gender, and occupation. The TM group had lower sickness rates in all categories of disease, including 87% less hospitalization for heart disease, and 55% less for cancer. The difference between TM and non-TM groups was greatest for individuals over 40. Alexander et al. found increased longevity and improved quality of life in elderly practitioners of the TM technique.

These and previous health and aging studies—along with the great variety of physiological, psychological, and sociological studies in all five volumes of the Collected Papers—support Maharishi's vision of a disease-free world, a world in which perfect health and long life are the norm for every human being. Health he describes as wholeness of life, integration of all aspects of mind, body, and behavior. The attainment of perfect health is one of Maharishi's greatest concerns—an absolutely vital ingredient in the creation of Heaven on Earth.

Maharishi's World Plan for Perfect Health

Maharishi's Master Plan in fact includes within it his World Plan for Perfect Health which he formulated in 1985. This plan calls for the prevention of all illness through the application of Maharishi Ayur-Ved, that aspect of Maharishi's Vedic Science which is dedicated to the creation of perfect health and long life for both individuals and nations (Maharishi's World Plan for Perfect Health, 1985). Ayur-Ved—the science or knowledge (Ved) of life (Ayuh)—had in recent centuries undergone the same process of dilution and confusion as other branches of ancient Vedic knowledge, until it came to be considered nothing more than herbal medicine. Maharishi's genius has been to revive this knowledge in its original wholeness, bringing out from this tradition of prevention-oriented natural medicine twenty powerful approaches to gaining perfect health and living in the state of enlightenment. It is to emphasize the contribution of Maharishi to bringing to light this and other branches of the ancient Vedic Science that we speak of Maharishi Ayur-Ved, to distinguish this from the greatly diminished version of Ayur-Ved prevalent in recent centuries.

Maharishi's Transcendental Meditation and TM-Sidhi program is the principal approach of Maharishi Ayur-Ved—the consciousness approach to preventing disease and gaining perfect health. The ultimate goal of Maharishi Ayur-Ved is expressed in the phrase, Ayurved amritanam—"Ayur-Ved is for immortality." The purpose of Ayur-Ved is not just to eliminate disease, but to create the state of enlightenment. According to Ayur-Ved the ultimate cause, Maharishi says, of all disease is pragyaparadh—the mistake of the intellect. All the approaches of Maharishi Ayur-Ved have as their goal the elimination of pragyaparadh, defined as the forgetting of the unified field of all the laws of nature by its diversified expressions, the loss of memory of unity by the field of multiplicity. The elimination of pragyaparadh is enlightenment—higher states of consciousness—the ultimate goal of all branches of Vedic Science, and the experience of life free from suffering, weakness, and problems.

Here at a glance are the twenty approaches of Maharishi Ayur-Ved to perfect health:

- 1. Consciousness
- 2. Primordial Sound
- 3. Intellect
- 4. Emotions
- 5. Language
- 6. Gandharv Ved
- 7. Senses
- 8. Psychophysiological Integration
- 9. Neuromuscular Integration
- 10. Neurorespiratory Integration

- 11. Physiological Purification
- 12. Diet
- 13. Herbs and Minerals
- 14. Rasayan
- 15. Behavior
- 16. Pulse Diagnosis
- 17. Jyotish
- 18. Yagya
- 19. Environment
- 20. World Health/World Peace

(Maharishi Ayur-Ved Association of America, 1988)

The re-awakening of these approaches is a clear expression of Maharishi's genius as a Vedic Scientist. Furthermore, it is an expression of the depth of his desire to utilize every possible means to accelerate the creation of Heaven on Earth.

Glaser (Paper 413) in this volume reviews recent research on two approaches of Maharishi Ayur-Ved: herbs and minerals and physiological purification procedures. One of the greatest contributions of Maharishi Ayur-Ved is its extensive knowledge of medicinal plants. We are extremely fortunate that Maharishi has gathered the greatest experts in this area—Dr. V. M. Dwivedi, Dr. B. D. Triguna, and Dr. Balraj Maharshi—to bring to light once again the beautiful and complete knowledge of how these herbs work.

In the context of describing the important research of Sharma et al. and others, Glaser discusses the concept of balance and intelligence in herbal and mineral preparations, particularly a special class known as rasayanas. The principle of complementarity in Maharishi Ayur-Ved holds that the sequence of biological information as stored in plants corresponds to the sequence of biological information in the human physiology. Maharishi explains that these herbal preparations act like special biological "software" that supplies the essential program to re-establish the order and balance in the source code of the system. He also explains that they function like a set of "tuning forks" that reset the correct sequential unfoldment of intelligence associated with proper functioning in the various cells and tissues in the body, at the same time removing any distortions that cause obstructions to the flow of intelligence. In this way the body can automatically correct any imbalances that might lead to disease. When biological information is highly ordered and integrated, the result is physiological balance—a state in which the parts of the organism are functioning in an integrated and harmonious state of equilibrium.

An important principle in Maharishi Ayur-Ved which promotes balance is the use of the whole plant, which allows a synergistic effect to take place in the body and eliminates the side effects usually found with modern pharmaceutical agents, caused by the isolation of the "active ingredient."

Rasayanas, especially Maharishi Amrit Kalash, are designed to act at the most fundamental level of the physiology—the junction point between consciousness and matter. Maharishi Amrit Kalash is described as creating balance from this level, establishing the basis for fully integrated functioning of mind, body, behavior, and the environment, and thus promoting the development of higher states of consciousness.

The multiple beneficial effects of Maharishi Ayur-Ved Bhasma Rasayan and Maharishi Amrit Kalash, as well as the Maharishi Ayur-Ved Panchakarma program of physiological purification procedures, give strong experimental evidence that supports these principles of balance and synergy.

It would be useful to highlight four of the disciplines of his Vedic Science which Maharishi has begun to put to use since 1987. These four, along with Yog (the Transcendental Meditation and TM-Sidhi program) and Maharishi Ayur-Ved, are playing an especially prominent role in Maharishi's efforts to create Heaven on Earth:

1. Maharishi Gandharv Ved—According to Maharishi's Vedic Science, the primordial sounds of nature—the sounds of the Ved—find their expression in music in the sounds of Gandharv Ved. The melodies and rhythms of Gandharv Ved are understood to be the melodies and rhythms of nature itself, rather than the composition of an individual composer. The sounds of Gandharv Ved vary according to the time of day and the change of season, since at these different times different laws of nature predominate. Playing these musical sounds resets the environment to be in balance, and in harmony with natural law. The power of this music inspired Maharishi to popularize it throughout the world through his Festivals of Music for World Peace, whose timing, interestingly enough, coincided with the two great summits between the superpowers—in Washington in December 1987, and in Moscow in June 1988—which led to the end of the Cold War. Maharishi has said of Gandharv Ved music:

It is fortunate for the world that the Gandharv Ved musicians of this generation have preserved the beautiful science and art of creating balance in nature through music.

Gandharv Ved is a precious discipline of Vedic Science, the complete science of life. It sends forth those powerful melodies and rhythms of nature to purify the atmosphere, thereby neutralizing negative trends and tendencies in the environment and promoting the orderly evolution of life.

Through their daily performance of the eternal music of nature around the world, the Gandharvans of India—the land of the Ved—are creating harmony in world consciousness, and thereby hastening the onset of world peace and the descent of Heaven on Earth. (Maharishi's Festival of Music for World Peace, 1987)

- 2. Maharishi Jyotish—Maharishi explains that all creation unfolds in an orderly sequential way. In fact it is so orderly that it is subject to calculation. This mathematically perfect order of creation is the field of Maharishi Jyotish. Through the mathematical, logical techniques of Jyotish, Maharishi says, we can locate the trends and tendencies of individual life within the sequentially unfolding pattern of creation. The practical value of this knowledge is that in advance one can know if some difficult period of life is coming. We can therefore take action in advance to neutralize the difficulty—we can handle the future in the present.
- 3. Maharishi Yagyas—The primary techniques used by Maharishi Jyotish to handle the future in the present are called Maharishi Yagyas. Maharishi explains Yagyas as the procedures he

has brought to light from the ancient Vedic wisdom to utilize the primordial sounds of nature (the Vedic sounds) to restore harmony between the individual and the cosmos. They are Vedic procedures (sometimes referred to as Vedic engineering) which can be utilized either to avert a particular oncoming danger predicted for an individual by Jyotish, or to create some fulfillment of a specific human intention or desire for a good effect to be created for the individual or society. Maharishi Yagyas are now being performed at the World Capital of the Age of Enlightenment, Maharishi Nagar, by specially trained Vedic pandits, whom Maharishi has taught to utilize the Vedic sounds at the para or transcendental level—at the level of the unified field. Performed from this level, Maharishi explains, the sounds create a powerful environmental influence, which negates stress in the environment and creates a nourishing influence on the whole world.

4. Maharishi Sthapatya Ved—Maharishi has recently begun to revive the discipline of Sthapatya Ved—the science of building in accord with natural law. Maharishi Sthapatya Ved is defined by Maharishi as the science of how to establish oneself in the environment so that one always has the full support of the evolutionary power of natural law in daily life (Maharishi Cities of Immortals, 1989). Sthapatya Ved gives the principles of design, including the siting of the building, its orientation, the lay-out of rooms, ventilation, building materials, gardens, city planning, etc., so that the environment is always fresh, and free from poison and stress, and is nourishing, uplifting, beautiful, and harmonious. It is these principles which Maharishi is using to design the ideal villages and Cities of Immortals which will replace the existing life-damaging living conditions throughout the world. Maharishi is further reviving the principles of Vedic farming—the ancient principles of growing food without the use of poisonous herbicides, pesticides, and fertilizers, so that there can be an abundance of naturally grown food everywhere in the world which promotes the health of the population and their enjoyment of life.

In this volume the research is focused on the effects of the Transcendental Meditation and TM-Sidhi program, but future volumes will focus on the research being conducted on these other Vedic technologies. As discussed by Glaser (Paper 413), already the research of Sharma et al. has shown clear evidence that Maharishi Amrit Kalash protects against chemically induced cancer in laboratory animals, and in laboratory studies enhances immune response, reduces the aggregation of blood platelets (significant in the prevention of cardiovascular disease), and affects the activity of brain opioid receptors, suggesting that this preparation may have application in enhancing psychological well-being. The research on the technologies of Maharishi's Vedic Science is proving to be an ever-expanding field with a fascinating future.

Conclusion

At the beginning of the Rik Ved there is an expression which Maharishi often quotes:

Agnih poorvebih rishibhi ridyo nootanairuta, sa devan ih vakshati
The Ved was honored by the ancient Rishis in their consciousness,
and also always by the Rishis of the present.

Rik Ved I.1.2

His Holiness Maharishi Mahesh Yogi is just such a Rishi of the present who has honored the Ved in his own consciousness, and thereby re-enlivened the knowledge and application of the unified field of all the laws of nature available in this ancient science. In fact he is more than a Rishi—he is a Maharishi, a great Rishi. A Rishi in India is understood to be one who sees the truth about creation, while a Maharishi is one who enlivens the truth in everyone—that is, a Vedic sage with the special ability to teach others to rise to his own level of experience of the unity of creation and of a life in perpetual Heaven on Earth. The five volumes of Scientific Research on Maharishi's Transcendental Meditation and TM-Sidhi Program: Collected Papers, Maharishi's Master Plan to Create Heaven on Earth, and the Heaven on Earth textbook for kindergarten to Ph.D. described above—all these together, combined with the extraordinary transformation occurring in world consciousness, make it clear that His Holiness Maharishi Mahesh Yogi is not just a Maharishi—he is a very special kind of Maharishi.

He is possessed of a supreme ability to restore the wholeness of the Vedic knowledge, and to make it simple to understand for people at any level of life anywhere. He clearly possesses a limitless vision for what is possible for human life—a vision shockingly unconventional in an age convinced of the permanency of its limitations. Watching him unfold and apply the ancient Vedic wisdom in a tireless manner day and night, one is totally convinced that the motivation which drives him on year after year is his deep concern for every human being on earth—and the generations as yet unborn. The world is his family—he is unified with everyone, and feels a compassion for every suffering human being. This is made particularly acute by his own experience from a very young age, through his own Master's teaching, that life is bliss—bliss is here to enjoy if only the field of transcendental consciousness can be experienced.

He has told the world that this experience is easy to attain. Flying in the face of centuries of entrenched misunderstanding, Maharishi brings to light that this experience is natural, because bliss is within every human being in their own transcendental consciousness, it is their own Self. As Maharishi reminds us—the Kingdom of Heaven is within.

The message of the creation of a heavenly life for humanity here on earth has been the theme of Maharishi's teaching from its very beginning. In *Beacon Light of the Himalayas*, a book published in November 1955 containing the first record of Maharishi's lectures, he said:

I am glad that thousands of people in Kerala have taken good advantage of my stay in these parts and they are enjoying "Heavenly Bliss," as some of them have called it; the "Peace of the Himalayas" in the midst of all business and the householder affairs. The gates of Heaven are now open to them in their life on earth. . . . Here is no empty promise of Heaven hereafter. Here is the positive experience of "Heavenly Bliss" during one's lifetime. Come on all who desire it. (Maharishi Mahesh Yogi, 1955)

And in January 1973, during a lecture to an international Transcendental Meditation Teacher Training Course in La Antilla, Spain, he said—foreshadowing both Heaven on Earth and the use of Yagyas to help bring it about, through the "laws of structural engineering" (using the underlying laws of nature at the unmanifest basis of creation to create effects on the surface of life):

This is wisdom, this is knowledge—knowledge of ultimate reality. Gaining the knowledge of the sap, one could manipulate anything on the surface. Gaining certain laws of structural engineering you raise the earth into Heaven.

From the beginning of his teaching also, Maharishi has understood the importance in this scientific age of confirming through scientific means the practicality of achieving these previously unimaginable goals, such as world peace, the elimination of disease, and the creation of Heaven on Earth. As early as 1959 Maharishi encouraged scientists to begin research on the Transcendental Meditation technique. And now, with the publication of this volume, there are 430 scientific studies on the Transcendental Meditation and TM-Sidhi program supporting his intention to transform the world and create Heaven on Earth through this knowledge, which is at once both most new and most ancient. His own desire to create Heaven on Earth, and his profound conviction that it can be done and is being done, was expressed in a 1989 publication on the building of the ideal communities called Maharishi Cities of Immortals:

Heaven on Earth has been the most laudable aspiration of the wise throughout the ages. Creation of Heaven on Earth is the most desirable project in the entire history of the human race.

Everyone can now enjoy Heaven on Earth through perfect alliance with natural law, through the enlivenment of the total potential of natural law in one's own consciousness.

Perfect alliance with natural law is now available to every individual and every nation through my Vedic Science and Technology—the perfect science and technology of life—which offers to enrich and raise to perfection all fields of daily life and create Heaven on Earth.

The inspiration to create Heaven on Earth comes from the great achievements of my movement around the world during the last 30 years and, above all, from the discovery of the Ved, the infinite creative intelligence of natural law, in the self-referral consciousness, transcendental consciousness, of everyone.

Now that scientific research has repeatedly proved that life can be lived in full accord with natural law through the practice of my Transcendental Meditation, that positivity and harmony can be created and negative trends can be completely eliminated throughout society, this is the opportune time for us to launch a global initiative to create Heaven on Earth now in this generation so that perfection is a reality of the daily life of everyone for all generations to come. (Maharishi Cities of Immortals, 1989)

For the tradition of modern science there could be no greater fulfillment than having its methods demonstrate the existence of the means to create Heaven on Earth. This volume, therefore, and the other volumes in the series, represent the fulfillment of modern science. These volumes are the confluence of the modern and ancient traditions—modern science studying Maharishi's Vedic Science and its technologies, and finding therein the vision and reality of a heavenly age dawning for the five billion citizens of the world.

The world can be truly grateful to Maharishi for the knowledge of Vedic Science he has brought to light after the centuries it had been lost or misunderstood, and for his successful activities to use this knowledge to create Heaven on Earth. Certainly there has been in human history no greater contribution by any one individual to his fellow human beings on earth than that which Maharishi has made to the five billion people alive at this time.

We can be grateful too that Maharishi saw the need of this scientific age to verify this knowledge through its own scientific methods. This has proven to be crucial to bringing the scientific age to its fulfillment in the age of Heaven on Earth Maharishi sees already dawning for humanity. It has indeed proven to have been a very fortunate day for the world when thirty years ago Maharishi suggested to American scientists to do research on the Transcendental Meditation program.

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