MAHARISHI'S GLOBAL IDEAL SOCIETY CAMPAIGN: IMPROVED QUALITY OF LIFE IN RHODE ISLAND THROUGH THE TRANSCENDENTAL MEDITATION AND TM-SIDHI PROGRAM

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The presence of nearly 300 experts practising the TM-Sidhi programme in Rhode Island, U.S.A. during the summer of 1978 was found to produce a holistic improvement in the quality of life in the state.—EDITORS

This study tested the prediction that when the number of participants in the Transcendental Meditation and TM-Sidhi program exceeds a certain threshold an influence of coherence is created in the collective consciousness of society, resulting in a profound and measurable improvement in the quality of life. This prediction was tested by measuring the effects of an experimental intervention in the state of Rhode Island, U.S.A. during the summer of 1978, when, as part of Maharishi's "Global Ideal Society Campaign," a sufficient number of practitioners of the Transcendental Meditation and TM-Sidhi program moved temporarily to Rhode Island.

In order to evaluate this influence an Ideal Society index combining eight variables associated with quality of life was formulated. Data for these variables were available for the seven-year period 1974 – 1980 on a monthly basis; these data were analyzed using time series analysis in order to most accurately and rigorously estimate intervention effects. Results showed that the project period displayed a significant improvement in the quality of life; a significant but less pronounced improvement in the quality of life was also found in the post-intervention period.

It is concluded that the practice of the Transcendental Meditation and TM-Sidhi program produces a unique and holistic improvement in the quality of life which is available for leaders of society to immediately implement.

INTRODUCTION

The discovery in 1974 that a small proportion of a population practicing the Transcendental Meditation (TM) technique can improve the quality of life of the whole society (Borland and Landrith, 1977), must stand as the most important discovery of modern sociology, with far-reaching and compelling implications for the well-being and progress of mankind. This phenomenon was named the "Maharishi Effect" by the scientists who first discovered it, in honor of His Holiness Maharishi Mahesh Yogi, founder of the TM program, who had predicted the effect as early as 1960. With the advent of the TM-Sidhi program in 1977 the Maharishi Effect was further extended to include the even more powerful effect of the TM-Sidhi program on the collective consciousness of society.

As with any major scientific discovery the understanding of the Maharishi Effect began with the appreciation of certain fundamental principles governing the functioning of natural law. The initial conception was then given appropriate theoretical and mathematical expression, and subsequently tested experimentally.
THEORETICAL FRAMEWORK OF THE MAHARISHI EFFECT—Maharishi locates the cause of all problems in society as the "violation of the laws of nature" by the individuals of every country. "Nowhere in any society does education culture man to think and act spontaneously in accord with natural law. Due to this universal lack in education the whole population of the world is continually violating the laws of nature." The laws of nature are ultimately responsible for maintaining progress and well-being in individual and collective life, and thus "violation of natural law must lead to suffering, frustration, and stress in individual life, while the cumulative effect of stress must necessarily result in strained and negative trends in society as a whole" (World Government of the Age of Enlightenment, 1982).

Maharishi explains that the Transcendental Meditation and TM-Sidhi program enlivens the "total potential of natural law in human awareness" and develops in the individual the ability to think and act "spontaneously in accordance with natural law." It is possible for human life to be raised to this level because the total potential of natural law, the unified field of all the laws of nature glimpsed by the supergravity theory of quantum physics, has been identified by Maharishi as the field of pure consciousness, experienced when individual awareness is in its simplest and least excited state.

The experience of the unified field in human awareness has been described by scientists of Maharishi European Research University.

Modern physics has, in its most recent development, provided a unified and holistic understanding of the entire range of natural law (fig. 1). Quantum field theory in its most advanced form—known as the theory of supergravity—unifies all the fundamental forces of nature and gives a clear understanding of the essential characteristics of natural law.

Rapid progress has been made during the last 20 years towards a unified understanding of natural law. From initial theories of four fundamental forces of nature, progressive unification has taken place, until at the present day, the theory of supergravity is the basis of complete unity of all the laws of nature. In this theory the superfield embodies the totality of natural law.

The third law of thermodynamics, itself based on the principles of quantum theory, provides the universal formula by which any system can create a state of alliance with the ground state of all the laws of nature. This law states that orderliness is created by reducing excitation; the state of least excitation of any system is a condition of maximum orderliness.

The Transcendental Meditation and TM-Sidhi program provides a simple, universal and natural formula for the individual to create orderliness in his own awareness, in accordance with the principle provided by the third law of thermodynamics. During Transcendental Meditation, consciousness experiences its state of least excitation, a state of perfect orderliness.

By comparison with supergravity theory this is found to be a direct experience within human consciousness of the ground state of all the laws of nature . . . . Established in this state of awareness, the individual thinks and acts spontaneously in a manner that is completely in accordance with the full potential of natural law . . . . As a result of experiencing the state of least excitation of consciousness—the field of perfect order—physiological functioning becomes characterized by orderliness and integration, and activity and behaviour assume the qualities of coherence and harmony (Clements, Chalmers, Bauhofer, and Werner, 1982).

Because pure consciousness is identified as the fundamental field of nature, the coherence created in individual awareness through the experience of pure consciousness is predicted to extend by a field effect to all other individuals, enlivening natural law in the collective consciousness of society and producing the Maharishi Effect.

Within the above theoretical framework the faculty of Maharishi European Research University developed specific guideline formulae predicting the number of "coherence-creating" individuals \( n \) required to create a cumulative influence of orderliness in a population \( (\text{size} = N) \).

These formulae are as follows:

a) Where \( n \) is the number of individuals practicing
the Transcendental Meditation technique, 
\[ n = \frac{N}{100} \].

b) Where \( n \) is the number of individuals practicing 
the TM-Sidhi program together, referred to as the 
group dynamics of consciousness, 
\[ n = \sqrt{\frac{N}{100}} \].

The phenomenon described by formula (a) is termed 
"the one-percent effect" and that described by 
formula (b) is termed the "Super Radiance effect." 1

The theory predicts an immediate effect from the 
introduction of a sufficient number of experienced 
participants into a population. For a case in which 
such participants are not available a training period 
of one week is required for the Transcendental Medita­
tion technique and a training period of three 
months is required for the TM-Sidhi program.

REVIEW OF PREVIOUS RESEARCH ON THE MAHA­
RISHI EFFECT—Since 1974, when the Maharishi Ef­
fect was first discovered, studies of increasing 
sophistication have been conducted to examine the 
precise relationship between participation in the 
Transcendental Meditation program and improved 
quality of life in society.

The initial study of the Maharishi Effect (Borland 
and Landrith, 1977) investigated the eleven cities in 
the United States with population larger than 25,000 
that had achieved one-percent participation in the 
Transcendental Meditation program in 1972, and 
compared them to control cities matched for geo­
graphic region, resident population, and college 
population. The "one-percent" cities showed a sig­
ificant decrease in crime rate from 1972 to 1973, while 
the crime rate of the control cities increased.

In a larger study covering an eleven-year period, 
crime trends were examined in the 24 cities in the U.S. 
with population over 10,000 in which one percent of 
the population had been instructed in the TM pro­
gram by 1972 (Dillbeck, Landrith, and Orme­
Johnson, 1981). These cities displayed a significant 
decrease in crime rate in 1973 compared to 24 control 
cities matched for geographic region, resident popula­
tion, and college population. In addition, the trend 
of crime rate decreased significantly over a six-year 
period (1972–1977) in the one-percent cities, both as 
compared to their own previous trend in the six-year 
period from 1967 to 1972 and as compared to the 
control cities over the same years. Both the immedi­
ate and long-term changes were significant after sta­
tistically controlling for demographic variables 
related to crime rate on which the two groups of cities 
differed.

A separate study (Landrith and Dillbeck, in press) 
on the same sample of "one-percent" cities with a 
population of more than 10,000 found that the cities 
that had reached one-percent participation in the TM 
program by the end of 1972 displayed decreased rates 
of suicides and auto accidents over the next five years 
in contrast to the mean of the previous six years for 
suicides and five years for auto accidents and in con­
trast to the same matched control cities as in the study 
of Dillbeck et al. (1981). These results were also signi­
ficant after controlling for demographic variables on 
which the two groups of cities differed.

Another study used a model taken from probabil­
ity theory to examine the influence of participation in 
the Transcendental Meditation program on crime 
rate in 23 cities in the Kansas City (U.S.) metropoli­
an area from 1971 to 1976 (Dillbeck, in press). A 
significant correlation was found between Transcen­
dental Meditation program participation and change 
in crime rate, even after statistically controlling for 
other demographic variables related to crime rate 
change such as income, stability of residency, number 
of police per unit population, and age distribution. 
Similar results were found in suburban Cleveland 
(U.S.) between the years 1974 and 1976 (Hatchard, in 
press).

It is striking that the studies discussed here have, 
between them, controlled for geographic region, 
population, population density, change in popula­
tion, racial distribution, unemployment rate, change 
in per capita income, percent below poverty level, 
residential stability, age distribution, median years 
education, and police coverage, and still found a sig­
nificant correlation between participation in the 
Transcendental Meditation program and crime rate 
decrease.

Furthermore, in two recent studies, utilizing a 
statistical strategy for assessing the causal relation­
ship between participation in the Transcendental 
Meditation program and crime rate change with cor­
relational data, the method of cross-lagged panel
The present study, according to the previously listed formulae, a significant result of the presence of the project organizers—of Rhode Island, with its population of slightly less than one million, is particularly interesting since an improved quality of life can be expected to occur solely as a result of the presence of the project organizers—a large group of Governors of the Age of Enlightenment (teachers of the Transcendental Meditation program who practice the TM-Sidhi program) who moved temporarily to the state. That is, at the end of the campaign there were 274 Governors in groups of 2 to 46 in the various cities throughout the state; the sum of the square of each group was 5,320, sufficient to create coherence in a group of 532,000 (Rhode Island Board of Executive Governors, 1978). In addition, there was already a sufficient number of individuals instructed in the Transcendental Meditation program in the state to bring the total influence of the Maharishi Effect in Rhode Island to slightly above the threshold level required to create an improved quality of life in the state as a whole. Thus, the project represented a special opportunity to test the influence of the practice of the TM-Sidhi program.

While previous studies of the Maharishi Effect have emphasized changes in total crime rate as an indicator of quality of life, in this study all available data from governmental agencies that provide a suitable measure of the quality of life in society were utilized. These variables were combined to form an Ideal Society index. This presents a more profound evaluation of the Maharishi Effect as a holistic phenomenon, the effect of which is expected to be seen in every aspect of life.

METHOD

The Ideal Society Campaign began in Rhode Island on the 12th of June 1978 with the arrival of approximately 300 Governors of the Age of Enlightenment who were then stationed in cities throughout the state in teams of various sizes. The visiting Governors left Rhode Island on the 12th of September. An initial report on the project was prepared by Zimmermann (1979), who collected data for 21 variables.

2. The World Government of the Age of Enlightenment is a nonpolitical, non-religious, global organization with the participation of the peoples of more than one hundred countries. The World Government of the Age of Enlightenment emphasizes that it does not usurp any of the functions of existing governments, nor does it replace them in any way. The World Government of the Age of Enlightenment offers to every national government the means to solve its problems through raising the national consciousness to alignment with the unified field of all the laws of nature.

3. By the beginning of August in 1978, 5,045 persons had been instructed in the Transcendental Meditation program in the state of Rhode Island (World Plan Executive Council, United States, 1978). According to the “one-percent” formula for the Maharishi Effect, these individuals would generate an influence of coherence for a population of 504,500. Together with the influence of the Governors in Rhode Island during the Ideal Society Campaign, the total influence of coherence would be sufficient for a population of at least 1,036,500, slightly larger than the population of Rhode Island.
The present study improves upon the research design of the preliminary previous report in several important respects. The first is that the present study includes data for each of the variables from at least two years after the intervention period in addition to a baseline period prior to the intervention; the previous study was completed before such data became available. The second improvement is that a control state, Delaware, was included in the study for comparison purposes. Delaware was chosen as the state most similar to Rhode Island; like Rhode Island, it is a small coastal state located not far from major metropolitan areas. The addition of the post-intervention period and the control state allow one to assess whether the intervention effects are isolated in both time and space, as predicted by the hypothesis, or whether they are generalized changes not closely associated with the time and place of intervention.

A third improvement in research design is that time series analysis was employed to test intervention effects. Time series analysis is the most rigorous procedure available for testing interventions in single systems. Parametric statistical tests assume that the observations are independent and normally distributed. Although most procedures are robust with respect to violation of the assumption of normality, the presence of autocorrelations (non-independent data in the time series) can lead to spuriously high test statistics (Box and Jenkins, 1976; Box and Tiao, 1975). Time series procedures essentially are structured to model the process which gives rise to the serial dependence of the data and to remove this dependence before intervention effects are tested. The previous study recognized that there may be a seasonal dependence in the data and attempted to control for this by analyzing difference scores from the same season in the previous year. The weakness of this method is that this specific assumed model may not fit all (or any) of the variables, and thus may not be called for; the differencing of data when it is not required results in a misspecified or nonparsimonious model which could bias the test statistics (McCleary and Hay, 1980, p. 97). In contrast, time series analysis (the Box-Jenkins approach) does not assume a specific model a priori but rather identifies the model that best fits the particular series.

Because time series analysis requires a large number of data points in the series, monthly data is required rather than the quarterly or bimonthly data used in the previous study. For this reason, and to verify all the data, monthly figures were collected from state and federal agencies for all relevant variables that were available in this format.

COMPOSITION OF THE IDEAL SOCIETY INDEX—According to the theory underlying the Maharishi Effect all negative trends in society are taken as indications of incoherence or disorderliness in the collective consciousness of society. An increase of positive trends in society is similarly indicative of the growth of coherence or orderliness in collective consciousness. Since positive trends are generally not catalogued in such a systematic and thorough manner as are statistics for negative behavior, all the variables considered here are related to negative behavior in society. A decline in the number of incidents is therefore taken to indicate an improved quality of life.

Eight variables, which were unambiguous indicators of the quality of life and for which monthly figures were available, were chosen to comprise the Ideal Society index. These variables were crime rate (rate of FBI Uniform Crime Index crimes), motor vehicle fatality rate, motor vehicle accident rate, death rate (other than motor vehicle fatalities), per capita beer consumption (from taxation figures), per capita cigarette consumption (from taxation figures), unemployment rate, and degree of pollution (particulates). Together these variables represent a wide range of expressions of the quality of life, including antisocial behavior, health-related behavior, health, economic well-being, and environment.

The variables included in the Ideal Society index in the present study represent a majority of the data included in the previous study and include additional variables as well. The preliminary report (Zimmermann, 1979) utilized an index of 21 different variables. A discussion of the difference between the indices used by the previous study and the present study follows.

The present study combined the seven categories of the Federal Bureau of Investigation Uniform Crime Index into one variable (as does the FBI), while the previous study included the categories as separate variables. For some research purposes it may be useful to study the crime categories separately, particularly if there are clear theoretical predictions of differential changes on the different categories. However, the previous research on the Maharishi Effect has studied total FBI Index crime rates and the theory of this effect does not make differential predictions.
for the different crime categories, all of which are serious crimes (viz., homicide, forcible rape, aggravated assault, robbery, burglary, larceny, and motor vehicle theft). There are also important methodological reasons for combining these crime categories into one FBI Index. An inspection of the separate time series for the different categories of crime indicated that for several of these categories the series could not easily be modeled, particularly those with very few instances, such as the violent crimes. Aggregation into one variable was sufficient to create a stable series, and thus the use of the FBI Uniform Crime Index as the crime variable was dictated by both theoretical and methodological considerations.

Deaths due to suicide and cirrhosis were used in the earlier study but were unavailable on a monthly basis by state. These variables are still included in the present study in the variable of total deaths. The variable of murder was also used in the previous report, but this crime category is virtually identical to homicides, which are included in the crime variable in this study.

Divorces and marriages were included as variables in the previous study; both of these variables were available on a monthly basis but were excluded because the figures do not reflect the actual behavior of interest on a monthly basis. Marriages and divorces are decided upon far in advance of the actual month of occurrence in most cases, and the time of decision cannot be determined. Their inclusion is therefore not appropriate in a study assessing the effects of a specific intervention which is short in duration.4

Data on hours of sunshine and inches of rainfall were included in the previous study but were omitted from the present study because of the difficulty in meaningfully establishing an index of optimal weather based on these figures without further detailed study of the geographical conditions in the experimental and control state. Carbon monoxide and photochemical violation days were used in the previous study (Zimmermann, 1979) but were unavailable as an uninterrupted time series on a monthly basis from a single observation station. Other pollution figures (particulates) were available by month and were included to reflect the impact of the Maharishi Effect on the ecological conditions. The theory of the Maharishi Effect predicts that not only will local pollution sources be influenced by the increased coherence and creative intelligence expressed in the individuals in the community, but also that the natural forces will adjust themselves in such a way as to exclude negative outside influences. A parallel can be drawn with the Meissner Effect, a phenomenon which was initially restricted to the exclusion of impinging magnetic fields from superconductors by virtue of a state of macroscopic quantum coherence of the electrons and which is being increasingly generalized to account for similar collective phenomena in other areas (Domash, 1978). The description of the Meissner Effect parallels very closely the concept of the exclusion of disruptive influences by a coherent collective consciousness.

The variable of unemployment was used in the previous study and in the present study as well. It might be objected that unemployment is greatly influenced by national as well as local factors. This concern is overcome in the present study because the use of a control state allows local effects to be studied independent of national (common) trends.

The variable of total auto accidents was also available on a monthly basis and was included in addition to traffic fatalities as a component of the Ideal Society index in the present study.

Each of the variables was obtained on a monthly basis from January 1974 to December 1980. The length of the baseline period was dictated by the fact that auto accidents and traffic fatalities were available from Rhode Island only from January 1974; a series of this length was sufficient for time series analysis.

The sources of the data are listed in Table 1.5 The beer consumption data were expressed in barrels consumed per month. The pollution data were monthly arithmetic means of total suspended particulates, expressed in micrograms per cubic meter. Site 6 in Rhode Island (Westminster Street in Providence) was the source of the only continuous series during the study period; site P1 in Delaware (Woodshaven

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4. A somewhat similar situation is found with the variables of beer and cigarette consumption. These variables are actually the number of units of each commodity taxed in the state each month; the taxes are paid by wholesalers or distributors and the commodities are then sold at the retail level. Thus, because of the lag between taxation and consumption, the figures do not exactly measure consumption. However, the taxation figures are the closest measure available of actual consumption. Moreover, consumption is expected to parallel the taxation figures quite closely because of the large turnover (great number of units taxed) each month.

5. The beer consumption data are listed in Table 1.
The major analysis reported in the text uses the FBI figure, but whatever figure is used, then the confidence in the effects is strengthened. The results of the analysis using the Rhode Island State Police figure for the discrepant month are reported in a footnote in the Results section. The results of the analysis using the Rhode Island State Police figure for the crucial intervention period, the data were analyzed using both figures separately. If the results are found to be independent of which figure is used, then the confidence in the effects is strengthened. The major analysis reported in the text uses the FBI figure, and is thus a more conservative test of the hypothesis. The results of the analysis using the Rhode Island State Police figure for the discrepant month are reported in a footnote in the Results section.

The only discrepancy in the data from that reported in the previous study was for several figures on some of the crime categories. The crime figures for the previous study were obtained from the Rhode Island State Police in 1978 and the figures for the present study were received from the Federal Bureau of Investigation after the FBI issued their final reports. The discrepancies were checked again with the Rhode Island State Police and all were found to be very small with respect to the overall totals—to small to influence the general results—except for the one figure of aggravated assault for August 1978. Because the FBI receives the data from the state police and further processes the information before issuing the FBI final reports, the FBI figures were used in the present study, except for the case of the large discrepancy. The Rhode Island State Police figure of 181 aggravated assaults in August 1978 differed substantially from the FBI figure of 255, and neither agency was able to give an explanation of the discrepancy. Because this discrepancy occurred during the crucial intervention period, the data were analyzed using both figures separately. If the results are found to be independent of which figure is used, then the confidence in the effects is strengthened. The major analysis reported in the text uses the FBI figure, and is thus a more conservative test of the hypothesis. The results of the analysis using the Rhode Island State Police figure for the discrepant month are reported in a footnote in the Results section.

All variables were then combined into one Ideal Society index for purposes of analysis. As previously mentioned, the Ideal Society index is used to reflect the holistic results of the Maharishi Effect. The use of the index also has two methodological advantages. One is that an effect of the combination of variables is to make the time series structure more simple and stable. Another advantage is that the results of the intervention should be more apparent in the index as a whole than in the separate variables. This is so because the nonintervention observations, varying somewhat at random, should cancel each other, reducing the variability of the series, while the intervention effects, if consistent in each variable, should increase in magnitude when the index series is formed. Such a procedure is useful because, according to the formulae previously described, the Rhode Island intervention just exceeded the threshold for a predicted effect; the increase in statistical power which results from the combination of variables is therefore important for the prediction of the study to be clearly tested.

It was desired that each of the variables be equally weighted in creating the Ideal Society index. In order to do so, each variable was standardized by converting the variable to the ratio of Rhode Island rate divided by Delaware rate and was formed for each variable. As a result of this procedure any intervention effects would reflect changes in Rhode Island which were not found in Delaware.

All variables were thereby independent of each other. The use of the index also has two methodological advantages. One is that an effect of the combination of variables is to make the time series structure more simple and stable. Another advantage is that the results of the intervention should be more apparent in the index as a whole than in the separate variables. This is so because the nonintervention observations, varying somewhat at random, should cancel each other, reducing the variability of the series, while the intervention effects, if consistent in each variable, should increase in magnitude when the index series is formed. Such a procedure is useful because, according to the formulae previously described, the Rhode Island intervention just exceeded the threshold for a predicted effect; the increase in statistical power which results from the combination of variables is therefore important for the prediction of the study to be clearly tested.

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ing it to a variable with mean zero and standard deviation one. The average of these variables was taken as the monthly Ideal Society index. Effects found during the intervention period are thus expressed in the metric of average number of standard deviations from the mean.

DATA ANALYSIS—The monthly Ideal Society index was analyzed using time series intervention analysis. Because the intervention was from June 12 to September 12 in 1978, the intervention does not exactly match the monthly data. It was decided to define the three-month intervention period as the months of July through September in 1978 because the first half of June was definitely not in the intervention period, while it is not unlikely that the effects of the intervention would continue for at least two weeks after the Governors left Rhode Island.

In addition, because this was the first study in which an intervention effect could be precisely modeled using time series analysis and for which a distinct post-intervention period was also available, the post-intervention period was modeled as a separate intervention to test for long-term effects of the intervention even after the Governors left Rhode Island. Because the purpose of the Ideal Society Campaign was to increase the number of individuals in the state participating in the Transcendental Meditation technique and the group practice of the TM-Sidhi program, there might be a long-term effect of these activities and of the coherence predicted to be created by the presence of the Governors. A non-significant parameter associated with the post-intervention period would indicate that the pre-intervention and post-intervention periods did not differ in overall quality of life; if so, the post-intervention parameter would then be left out of the model and the remaining parameters re-estimated.

RESULTS

The general model used in this study is the transfer function model \( Y_t = \omega_0 I_0 + \omega_1 I_t + N_t \), where \( Y_t \) is the Ideal Society index time series, \( I_0 \) is the intervention function which is zero before and after the intervention and one during the intervention, \( I_t \) is a post-intervention step function which is zero at all times except after the intervention, and \( N_t \) is a stochastic "noise" component which is modeled using the time series ARIMA (autoregressive integrated moving averages) procedures (Box and Jenkins, 1976; Tiao, Box, and Hamming, 1975).

The noise component \( N_t \) is first specified from the autocorrelation and partial autocorrelation structure of the time series. \( N_t \) acts as the null hypothesis in the intervention analysis, and the specification of \( N_t \) prior to the intervention removes the autocorrelation structure from the series, allowing the intervention parameters to be accurately estimated. In the present case \( N_t \) was identified using the entire series (84 observations) rather than only the pre-intervention series because the baseline period was quite small and because it was assumed that the intervention would not change the structural characteristics of the noise model. It should be noted that this is a very conservative strategy which might result in some reduction of the magnitude of the intervention effects; it was, however, found to be necessary to properly specify a model in which the autocorrelation structure was removed when intervention effects were tested on the entire series.

The model for \( N_t \) included autoregressive parameters of the third order (quarterly seasonality) and of the twelfth order (yearly seasonality). Thus,

\[
N_t = (1 - \phi_1 B - \phi_2 B^2) a_t + c,
\]

where \( B a_t = a_{t-1}, \phi_1, \phi_2 \) are autoregressive parameters, \( a_t \) is a series of independent and identically distributed random disturbances, and \( c \) is a constant.

The intervention component \( (\omega_0 I_0) \), the post-intervention parameter \( (\omega_1 I_t) \), and the noise model \( (N_t) \) were then jointly estimated from the series. Diagnostic tests of the residuals of the model were acceptable. No autocorrelations or partial autocorrelations were significant at the 0.05 level, consistent with the hypothesis of a serially independent disturbance. In addition the Ljung-Box test for the combined significance of the observed residual autocorrelations (Ljung and Box, 1978) gave a \( Q \)-statistic \( Q(36) = 32 \) for autocorrelations 1 through 36, distributed as chi-square with 32 degrees of freedom, \( p > .40 \).

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>ESTIMATE</th>
<th>t(68)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention (( \omega_0 ))</td>
<td>-.4093</td>
<td>-2.64***</td>
</tr>
<tr>
<td>Post-Intervention (( \omega_1 ))</td>
<td>-.2471</td>
<td>-2.96****</td>
</tr>
<tr>
<td>Quarterly Autoregressive (( \phi_1 ))</td>
<td>.2714</td>
<td>2.44**</td>
</tr>
<tr>
<td>Yearly Autoregressive (( \phi_2 ))</td>
<td>.2391</td>
<td>2.34*</td>
</tr>
</tbody>
</table>

* \( p < .05 \), two-tailed    ** \( p < .025 \), two-tailed
*** \( p < .01 \), one-tailed  **** \( p < .005 \), one-tailed
Table 2 lists the parameter estimates and their significance tests. The intervention parameter was $-0.41$, $t(68) = -2.64$, $p < .01$, one-tailed. In addition to this significant improvement in the quality of life during the intervention period, there was also a significant but less pronounced improvement after the intervention, indicated by the post-intervention parameter of $-0.25$, $t(68) = -2.96$, $p < .005$, one-tailed. Figure 2 illustrates in sums of three-month periods the Ideal Society index time series (multiplied by negative one, to express the index in terms of positive quality of life), comparing the intervention period to the pre-intervention period. It should also be noted that if the post-intervention parameter is left out of the analysis so that the intervention effect is tested against the entire series, including the higher post-intervention series, the intervention effect is still significant (irrespective of whether the Rhode Island or FBI figure for aggravated assault for August 1978 is used).

8. Substitution of the Rhode Island State Police figure for aggravated assault in August 1978 into the Ideal Society index resulted in almost identical results in the overall analysis. All parameters were identical to two decimal places, and the intervention effect $t$-statistic increased slightly to $-2.67$, $p < .005$, one-tailed.

9. Although the parameter estimate indicating the magnitude of effect is larger for the intervention period than for the post-intervention period, the post-intervention $t$-statistic is slightly greater because the small number of observations in the intervention period gives rise to a higher standard error for the intervention.
intervention and post-intervention periods in the series. The intervention effect found here represents an average improvement of 0.41 standard deviations on each of the quality of life variables during the intervention period and an average improvement of 0.25 standard deviations during the post-intervention period, in comparison to the mean of the monthly periods of the pre-intervention time series.

**DISCUSSION AND CONCLUSION**

The results of this study indicate by direct intervention a causal relationship between participation in the Transcendental Meditation and TM-Sidhi program and improvement in the quality of life at the level of an entire state. This conclusion is strengthened by the facts that the improvement in the quality of life in Rhode Island in the summer of 1978 had been predicted in advance, and that it occurred in Rhode Island in contrast to the control state Delaware.

This conclusion is further substantiated by research on subsequent interventions on the state and national level involving the collective practice of the TM-Sidhi program by more than the square root of one percent of the population. A similar intervention study using time series analysis found a decrease in daily crime totals in the Union Territory of Delhi, India during a five-month course in which a sufficient number of individuals participated in the group practice of the TM-Sidhi program (Dillbeck, Cavanaugh, and Van den Berg, in press). A study in Holland found that during three one-month periods, in which the square root of one percent of the Dutch population had been practicing the group dynamics of consciousness (group practice of the TM-Sidhi program) in or near Holland, significant reductions in national crime rate occurred in comparison with an eleven-year baseline (Burgmans, Van der Burgt, Langenkamp, and Verstegen, in press). Furthermore, significant decreases in national traffic accident rate were found during two of the experimental periods, while a clear trend towards significance was seen in the third period. In the United States, Davies and Alexander (in press) found significant decreases in 14 categories of accident, suicide, and homicide during a two-month assembly, in which more than the square root of one percent of the U.S. population collectively practiced the TM-Sidhi program. The Standard and Poor’s Composite 500 index of stock prices significantly increased during this period suggesting increased optimism and confidence in the nation.

Another important implication of the present study is the importance of maintaining a sufficient number of "coherence-creating" individuals in a society once such interventions have been made; this ensures that there is not a return to the previous level of disorder in society once the group of individuals initially responsible for generating the Maharishi Effect have to leave. For example, in the present study, there were already a substantial number of individuals in Rhode Island instructed in the Transcendental Meditation technique (approximately one-half of one percent) and the TM-Sidhi program prior to the Ideal Society Campaign, and more were added during the campaign. It would be predicted that the post-intervention effect would not have been so strong were it not for the effects of this coherence-creating group.

The results of the present study, therefore, taken together with those of other intervention studies involving the TM-Sidhi program, and with the numerous earlier studies on the Maharishi Effect discussed above, present extremely strong experimental evidence to show that the practice of the Transcendental Meditation and TM-Sidhi program by even a small number of individuals in any society can produce a powerful influence of orderliness and coherence in the collective consciousness of society.

The far-reaching implications of the Maharishi Effect and the simplicity with which it can be created on a national level offer the possibility for leaders of society in every nation to immediately implement the formula for national coherence and thus improve the quality of life in the nation.

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