DEVELOPING CONSCIOUSNESS IN ORGANIZATIONS: THE TRANSCENDENTAL MEDITATION PROGRAM IN BUSINESS

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ABSTRACT: This paper reviews retrospective, prospective, and case research on workplace applications of Maharishi's Transcendental Meditation technique for developing consciousness and human potential. The distinctive psychophysiological state of restful alertness produced by the Transcendental Meditation technique appears to improve employee health, well-being, job satisfaction, efficiency and productivity, in turn influencing organizational climate, absenteeism, and financial performance.

Observers of the contemporary business scene are reporting remarkable changes in business principles and practices, such as transformations from hierarchical structures with unempowered employees to team-based structures that empower employees, from analytic justification to creative problem solving, from competition to cooperation, and from an emphasis on physical assets to an emphasis on human resources as a company's most valuable resource. In their search for ways to explain these phenomena and to trigger them in companies where they have not yet occurred, leading consultants and writers have begun to speak of growth of consciousness as a key element underlying these transformations (e.g., Blanchard, 1993; Koestenbaum, 1991; Maynard & Mehrtens, 1993; Weiss, 1994) and to regard these shifts in paradigms or

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mind-sets as indications of a "new management consciousness" (Joiner, 1994, p. 4). Ray, professor of creativity, innovation, and marketing at Stanford University, writes, "the new paradigm . . . has many aspects, but its foundation is that consciousness is causal . . . and that the power of the individual psyche is far more vast than we could have previously imagined" (1992, p. 27).

This is not the classical viewpoint of Western psychology. In fact, modern psychology lacks a single comprehensive theory of mind and consciousness that can account for the structure and full range of mental processes (Alexander & Langer, 1990). To understand the concept of consciousness, to determine how consciousness affects individual and organizational functioning, and to explain previously unknown phenomena, such as individual peak performance (Garfield, 1986) or metanoic alignment (Senge, 1990), leading thinkers are turning to other traditions of knowledge. Ray (1993, p. 292) suggests that the emerging business paradigm will include a "synergistic combination" of ancient wisdom and modern science.

Two recent articles discuss a theory of consciousness and go one step further to say that empirical research has already been conducted on the development of consciousness in organizations (Gustavsson & Harung, 1994; Harung, 1993). They hypothesize that the simple technique of Transcendental Meditation, drawn from an ancient tradition, could positively affect the functioning of an entire organization. Although the Transcendental Meditation technique became popular as a tool for individual development in the 1970s, the current business climate reflects a new depth of corporate interest in programs offering to develop human capital, and new receptivity to offering meditation programs for employees. To understand why managers would be interested in using meditation in their firms and how transformations of human consciousness could affect corporate functioning, we will explore this concept of consciousness and its associated research.

Gustavsson and Harung's concept of consciousness is drawn from the Vedic tradition, which has been systematically revived by Maharishi Mahesh Yogi, the founder of the Transcendental Meditation program. Although Transcendental Meditation has often been perceived as a stress management technique, especially in the United States, Maharishi has consistently described it more importantly as a technique which is fundamental for the development of consciousness (Maharishi Mahesh Yogi, 1967, 1994).

Of the meditation and relaxation techniques currently available, Maharishi's Transcendental Meditation program has been most widely studied (Wallace, 1993), perhaps because it involves no life-style changes and has been learned by more than four million people throughout the world. This article briefly addresses this Vedic concept of consciousness and then reviews a small portion of the extensive body of research on the Transcendental Meditation technique, specifically those studies on its effects in the workplace. Although the methodologies used in these studies parallel the developments in organizational research in general, the findings challenge much of our currently accepted understanding of organizational behavior.

This article reviews this body of literature on applications of the Transcendental Meditation program to work in terms of units of analysis, research methods, and findings. The article is organized by units of analysis: two groups of studies address work-related effects of the practice at the individual level, and one group explores organizational level variables. The designs discussed include retrospective studies, withincompany prospective analyses, and case studies.

DEVELOPING CONSCIOUSNESS IN THE INDIVIDUAL AND THE CORPORATION

We are all familiar with three states of consciousness: waking, dreaming, and sleeping. Wallace (1993) explains that according to ancient records, modern science, and the experiences of practitioners of Transcendental Meditation, a fourth state of consciousness also exists, known as *pure consciousness*. It is described as a state of restful alertness, in which the body is at rest but the mind is fully alert, poised for but not yet engaged in activity. The distinctive state produced during the practice of Transcendental Meditation is characterized by deep physiologic rest, indicated by a marked decrease in respiration (Dillbeck & Orme-Johnson, 1987; Wallace, 1970; Wallace & Benson, 1972; Wallace, Benson, & Wilson, 1971), along with enhanced mental alertness, indicated by increased EEG power and coherence (Alexander, Cranson, Boyer, & Orme-Johnson, 1987; Orme-Johnson & Haynes, 1981).

Experiencing this silent field of pure consciousness has been shown to enrich the other states of consciousness, making the waking state more alert and dynamic and sleep more profound and restful (Wallace, 1993). For example, increased EEG coherence during the practice of Transcendental Meditation has been shown to be significantly correlated with enhanced concept learning, creativity, fluid intelligence, moral reasoning, and decreased neuroticism, and increased neurological efficiency measured by H-reflex recovery (e.g., Dillbeck & Araas-Vesely, 1986; Dillbeck, Orme-Johnson, & Wallace, 1981; Orme-Johnson & Haynes, 1981). In this article, *developing consciousness* refers to this process of experiencing pure consciousness and enriching the other three more familiar states of waking, dreaming, and sleeping.

Transcendental Meditation is a simple, natural mental technique

practiced sitting with eyes closed for twenty minutes twice a day. It is distinct from philosophy, prayer, or contemplation. It is not based on the content of thought but instead involves the effortless but systematic refinement of the thought processes.

Transcendental Meditation is an effortless procedure for allowing the excitation of the mind to gradually settle down until the least excited state of mind is reached. This is a state of inner wakefulness with no object of thought or perception, just pure consciousness, aware of its own unbounded nature. It is wholeness, devoid of difference, beyond the division of subject and object—transcendental consciousness (Maharishi Mahesh Yogi, 1976, p. 123).

The subjects in these studies learned the Transcendental Meditation technique from qualified teachers in standard courses of instruction that included sessions for verification of correctness of the practice. Thus it may be concluded that subjects learned and practiced the technique as defined by both the researchers and the authors.

Due to the systematic and standardized approach to teaching and verification of correct practice, the effects of the Transcendental Meditation technique have been open to experimental validation (Dillbeck & Orme-Johnson, 1987). Statistical meta-analyses have compared the effects of various forms of meditation and relaxation and found that practice of the Transcendental Meditation technique is associated with significantly greater autonomic stability (Dillbeck & Orme-Johnson, 1987); significantly greater self-actualization (Alexander, Rainforth, & Gelderloos, 1991); significantly decreased trait anxiety (Eppley, Abrams, & Shear, 1989); and significantly reduced substance abuse, i.e., cigarettes, alcohol, and illicit drugs (Alexander, Robinson, & Rainforth, 1994). Although over 400 studies in physiology, psychology, and sociology have been conducted at over 200 research institutions around the world, the following discussion focuses on those studies that specifically deal with work and business.

INDIVIDUAL AND SOCIAL-PSYCHOLOGICAL BENEFITS OF DEVELOPING CONSCIOUSNESS

The earliest work-related studies asked whether the benefits being reported in the non-business literature were consistent with the goals of the business world. They asked, do people who practice the Transcendental Meditation technique become more or less productive? Are they better or less able to work with others? Several retrospective studies were conducted to answer these questions, which were later followed by prospective studies.

Retrospective Studies

Four cross-sectional exploratory studies surveyed full-time working people by comparing retrospective self-reports of meditators to non-meditators using pre-experimental designs, specifically static group comparisons (Campbell & Stanley, 1963).

Frew (1974) used questionnaires to investigate the relationship between practice of the Transcendental Meditation technique and workplace productivity, defined in terms of job satisfaction, performance, turnover propensity, relationship with supervisor, relationships with peers, and motivation to climb the hierarchy. Responses were solicited from full-time employed practitioners of the Transcendental Meditation technique and from their supervisors and co-workers. The latter group was used to triangulate the self-reports and check the direction of subject group response. A comparison group of graduate student non-meditators was asked to report changes in their productivity occurring as a result of any significant experience or training undergone in their recent past.

The relationship between two of the variables selected, job satisfaction and job performance, has long been a popular subject of investigation "despite a profusion of empirical non-support" (Iaffaldano & Muchinsky, 1985, p. 269). Maharishi's theory posits that development of consciousness is a moderating variable: if the underlying field of pure consciousness is utilized, there will be positive development in both job satisfaction and job performance.

Frew (1974) found that compared to non-meditating students, practitioners of the Transcendental Meditation technique reported improvements that were statistically significant: greater job satisfaction (p < .01), improved job performance in terms of output (p < .01), greater job stability (p < .05), better interpersonal relationships (p < .05), and decreased orientation to climb "the corporate ladder" (p < .01). The direction of these findings was confirmed by supervisor and co-worker reports. Furthermore, the findings were more pronounced for persons in higher organizational levels than for those in lower levels, and for persons working in more democratic organizational structures than for those working in autocratic structures.

A replication (Frew, 1977) surveyed 250 non-meditators, including randomly selected subjects and graduate students, and 250 meditators. All non-student subjects worked full-time, and no subjects from the first study were resurveyed. Three additional dimensions of productivity were addressed: satisfaction with specific job content, perceived image among co-workers, and satisfaction with the organization as a whole. The findings were statistically significant and similar to those of the earlier (1974) study. A replication by Friend (1977) extended Frew's (1974) work by comparing reported work-related benefits from practice of the Transcendental Meditation technique to benefits from other self-improvement programs. Questionnaires sent to meditators, randomly selected subjects, and part-time MBA students asked about changes in productivity occurring as a result of any significant experience or training, while another group of meditators were asked to report changes in their productivity occurring specifically as a result of practicing the Transcendental Meditation program. Friend concluded that effects from the Transcendental Meditation technique were superior to MBA program effects and as good as or better than those reported by the random sample; the strength of the effect was directly related to the length of time practicing the Transcendental Meditation technique; and job characteristics did not moderate the strength of these effects.

In Sweden, a study compared working people who had learned the Transcendental Meditation technique to working people who had signed up to learn (but had not yet started) the practice (Jonsson, 1975). Compared to controls, the meditators reported significantly greater alertness and activity (p = .033 and p < .001); greater accomplishment with less effort (p = .002 and p < .001); greater self-confidence (p < .001); reduced irritability (p = .007); improved cooperation (p = .034); and improved discrimination in assigning priorities (p = .035). This study also found that the meditators, whether they practiced the technique regularly or not, considered it useful in their work and potentially valuable to their organizations.

Viewed collectively, these four studies indicate that developing consciousness was subjectively perceived as beneficial in work-related contexts, suggesting that the Transcendental Meditation technique could serve as a useful organizational tool. To ascertain the validity of such a conclusion, however, studies within organizations were needed.

Within-Company Prospective Studies

The first prospective studies on the Transcendental Meditation technique conducted within firms appeared in 1990 on studies conducted during the previous decade. These studies explored the development of consciousness in organizations and addressed the Transcendental Meditation program as a stress management or wellness enhancement tool.

Due to the constraints imposed on conducting research in corporate settings, these studies used quasi-experimental designs, which was an improvement over the earlier studies (Campbell & Stanley, 1963). They incorporated longitudinal assessments, demographically similar controls drawn from the same organization, standardized measures, and multidimensional questionnaires. One study used second-site replication (Alexander et al., 1993), one supplemented questionnaires with interviews (Gustavsson, 1992), and three made use of direct physiological measures (Alexander et al., 1993; Gustavsson, 1992; DeArmond, Alexander, & Stevens, 1994). This shift toward more sophisticated methodologies reflects earlier recommendations (Newman & Beehr, 1979; Porras & Berg, 1978), and parallels the general trend toward more rigor in stress management and organizational research (see Ivancevich, Matteson, Freedman, & Phillips, 1990; Nicholas & Katz, 1985; Porras & Berg, 1978).

The earlier findings were confirmed by longitudinal studies conducted independently in a division of a Fortune 100 company, a smaller sales distribution firm in the same industry, a health care equipment manufacturer, and 778 employees in one of the largest manufacturers in Japan. Employees' regular practice of the Transcendental Meditation technique led to significant improvements in job satisfaction, efficiency and productivity, and personal and work relationships compared to controls (Alexander et al., 1993; DeArmond, Alexander, & Stevens, 1994), as well as the employees' physical and mental health and well-being (Alexander et al., 1993; DeArmond, Alexander, & Stevens, 1994; Haratani & Henmi, 1990a, 1990b).

The two-site study (Alexander et al., 1993) not only provided unambiguous results about the value of the Transcendental Meditation technique in reducing job stress, it also related findings about job stress to other areas of concern, such as employee effectiveness, job satisfaction, and work and personal relationships. A principal components analysis identified three factors underlying this wide range of improvements and found that compared to controls, meditators improved significantly on all three: "occupational coherence" (p = .00005), indicated by a simultaneous decrease in maladaptive functioning (reduced anxiety and health complaints) integrated with an increase in adaptive behavior (increased employee effectiveness and improved relationships); "physiologic settledness" (p = .04), indicated by three highly correlated measures of basal skin conductance levels; and "job and life satisfaction" (p = .004), indicated by greater intrinsic and extrinsic job satisfaction and reduced cigarette and hard liquor consumption.

The generalizability of the findings is supported by Japanese research which found significant decreases (p < .05 to p < .001) compared to controls on measures of psychological distress, health complaints, insomnia, and smoking (Haratani & Henmi, 1990a, 1990b), and by a recent study of 76 managers who volunteered to participate in a corporate wellness program (DeArmond, Alexander, & Stevens, 1994). One half of the group learned the Transcendental Meditation technique and the others, matched for age, race, education level, hours worked per week and job type, served as controls. Over a three-month period, the meditating managers improved significantly compared to controls on measures of mental health (p=0.047); vitality and energy (p=.006); perceived stress (p=.014); somatic symptoms of stress (p=.003); and healthful and regular habits of exercise, diet and sleep as well as levels of alcohol and cigarette consumption (p=.027). Significant reductions in total blood cholesterol compared to the control group (p=.042) equated with a 7 to 10% reduction in risk of heart attack. Analysis of covariance found that subjects' pre-test level of expectation could not account for the results.

In addition, the managers' organizational contribution was evaluated by their peers using items adapted from standardized measures that addressed productivity (including effective planning, alertness, time management, efficiency and organization), leadership practices, observed anger, job satisfaction, general happiness, energy level, and relationships with co-workers, supervisors and subordinates. Compared to controls, the meditating managers improved significantly on this composite measure of organizational contribution (p = .013), with positive changes in each of the areas listed.

To investigate the development of consciousness in organizations, Gustavsson (1990, 1992) studied the effects of the Transcendental Meditation technique on the top management team and employees of a Swedish public utility. Comparison of meditating and non-meditating managers found that although outside pressures on the team were increasing, the meditating managers reported a more creative climate and better group spirit, while chief executives perceived increased holistic thinking (defined as the amount of information about the corporation available) among the managers. Satisfied with the results, the division head offered the Transcendental Meditation program to the white collar employees. Shortly after the program began, he was promoted and a new division head appointed.

Gustavsson (1992) then compared meditating and non-meditating employees and found significant improvements in psychological health, reduced time for onset of sleep, and reduced risk for cardiovascular disease (p<.001 to p<.03). Compared to the previous year, there was a 14% decrease in absenteeism rate in the experimental group.

Gustavsson's (1992) attempts to assess changes in climate and culture were less conclusive. Rosen (1989) observes that corporate reorganization can lead to unpredictability and uncertainty, even illness. Although in this case, the change in leadership did not cause illness among the employees, it did lead to feelings of insecurity. The employees wanted a more creative climate, greater clarity about the company's goals, and greater stability in the workplace. His multi-dimensional data allowed Gustavsson to conclude that the meditators had developed better psychological and physical health, and when faced with a situation of conflict, were better able to recognize and articulate their needs. These studies support the hypothesis that by developing pure consciousness, employees become more alert and dynamic thus enhancing their well-being and productivity. One could conclude that widespread application of the Transcendental Meditation program merits consideration as a program for occupational stress reduction, health improvement, and performance enhancement in a corporate setting.

ORGANIZATIONAL BENEFITS OF DEVELOPING CONSCIOUSNESS

Although companies were offering their employees the Transcendental Meditation program in the 1970s as a tool for individual development (Frew, 1977; Ivancevich & Matteson, 1990; Kory, 1976; Marcus, 1977), reports indicating that practice of the Transcendental Meditation technique also contributes to bottom-line measures of business success began to appear in the mid-1980s. These cases used the organization as the unit of analysis, employed a social-psychological definition of organization as membership in a worksite culture (Herriott, 1989), and reported changes on quantitative indicators available to executives and managers. Areas of research interest included worker absenteeism, productivity levels, financial performance in terms of profits and sales, and customer satisfaction. Three cases suggest that large percentages of organization members practicing the Transcendental Meditation technique contribute to improvements in organizational performance.

For example, a chemical manufacturer and supplier to the U.S. automobile industry had survived four years of flat sales and declining profits in a tightening market when a new CEO offered the Transcendental Meditation program to the workforce as a turnaround strategy. Fifty-six of the 70 employees learned the technique. The following four years saw a resurgence in the automobile industry but not to the extent of the growth experienced by this firm. No new people nor equipment were brought in, yet productivity increased 52%. Annual sales per employee increased 88% from \$133,000 to \$250,000, with 80-95% of the sales representing new customer accounts. Neither new strategies nor threats were used, yet labor costs as a percentage of sales decreased 39%, the number of work days lost to poor health or injuries declined from 70 days per employee to less than 35 days, and absenteeism declined 89%. As the number of meditating employees and their productivity rose, net income increased steadily (Swanson & Oates, 1989). The CEO attributed the growth to the employees' new ideas, energy and effectiveness arising from more positive work attitudes and a more harmonious work climate (personal communication, R. Montgomery, former CEO, Nov. 5, 1994).

In Australia, a mutual fund company offered instruction in the

Transcendental Meditation technique to employees to reduce stress and anxiety and make their sales training more effective. In one year 55% of the 350-member sales force learned the technique. They reported reduced anxiety, tension, and fatigue; relief from insomnia; greater ability to be motivated; and a dramatic improvement in job-related and personal communication. Company records showed "before that year was out, sales in the company as a whole had increased 250% over the previous year with the meditators accounting for the bulk of the increase" (Swanson & Oates, 1989, p. 98). Since then, new sales personnel have routinely been offered instruction in the technique.

In Germany, the directors of a finance company offered the Transcendental Meditation program to employees as part of their in-service training. After 20 of the 100 employees had been instructed, the directors noted an increased volume of lending, a general improvement in the work climate, and marked reductions in the number of insolvency cases, employee absences due to illness, and customer complaints. Four years of radical growth followed, in which balance sheet totals grew by 230% and profits increased over 300% with only a 28% growth in personnel (Gottwald & Howald, 1989, 1992).

The dramatic improvements in financial performance reported at these three sites suggest that development of consciousness can not only improve climate and reduce absenteeism but can also literally make an organization more productive and profitable.

DISCUSSION

This paper has reviewed the literature on the applications of the Transcendental Meditation program in business. Figure 1 classifies the existing studies in terms of units of analysis (individual vs. corporate) and research design (pre-experimental vs. quasi-experimental) and suggests areas for future work. The studies reviewed suggest that employees who develop consciousness through practice of the Transcendental Meditation technique make greater contributions to their workplace.

At the individual level, the retrospective pre-experimental studies relied on self-reports using unvalidated questionnaires; they lack systematic sampling, pre-test measures, and random assignment to groups, although Jonsson (1975) at least matched for interest in the Transcendental Meditation program. Yet when the same research questions were addressed using longitudinal quasi-experimental designs, demographically similar controls, standardized questionnaires, direct physiological measures, and second-site replication, the findings were similar. This constancy of results gives greater confidence that use of the Transcen-

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UNIT OF ANALYSIS Individual & Corporate Social-Level Psychological R Within-Company Prospective Ouasi-Studies Experimental (Alexander et al., 1993; Gustavsson, 1990, 1992; Haratani & Henmi, 1990a, 1990b; R DeArmond, Alexander &

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Case Studies

(Gottwald & Howald,

1989, 1992;

Swanson & Oates, 1989)

dental Meditation technique can have beneficial effects on individual functioning and social relations in the workplace.

Research conducted in non-workplace settings on the effects of the Transcendental Meditation technique on cognitive performance has found growth over the long term of general intelligence (Cranson et al., 1991), ego development (Alexander et al., 1990), and creativity (Travis, 1979), as well as enhanced flexibility of perception and verbal problem solving (Dillbeck, 1982), field independence (Pelletier, 1974), and orientation toward positive values (Gelderloos et al., 1987). Such findings have led researchers to propose that experience of pure consciousness is a mechanism to stimulate marked developmental advance even during adult years (Alexander et al., 1990), a development associated with greater effectiveness on the job (Harung & Heaton, 1993; Torbert, 1987).

Further work could address these cognitive variables and others related to business, such as motivation or problem-solving styles, to determine whether they improve in the work setting under conditions of developing consciousness. Ideally, future work would assess these variables using hard criteria, i.e., quantitative measures of job behavior and system performance, as opposed to attitudinal and perceptual questionnaires. The challenge is not only to the researcher but also to the sponsoring organization. Such studies require a commitment from organizations to support a program of sufficient scope to permit large sample sizes; random assignment of subjects to treatment, alternate treatment, and control groups; and long-term assessment.

At the corporate level, the case studies reporting increased productivity and profitability suggest that individual improvements in physical health, attitudes, satisfaction, behavior, and relationships may aggregate as improvements in the company as a whole. For example, the reported reductions in absenteeism may be due in part to improved employee health. This inference is consistent with findings from a five-year study of medical care utilization statistics which compared a group of 2000 participants in the Transcendental Meditation program with a normative data base of 600,000 members from the same major health insurance carrier. The experimental group's medical utilization rates were markedly lower in all categories of hospitalization, doctors visits, and incidence of disease (Orme-Johnson, 1987). Similar findings in the workplace could represent substantial savings in corporate health care costs. Future organizational research could assess the health benefits accruing from practice of the Transcendental Meditation technique using hard measures of sickness, accidents, health insurance claims, and disability claims.

Although the preliminary case reports are intriguing, it would be useful to see them replicated under more rigorous conditions, using research protocols, multiple sources of evidence, respondent review, and cross-case replication (Larsson, 1993; Yin, 1989).

At the organizational level, the blank cell in the matrix (Figure 1) shows that neither true nor quasi-experimental studies have yet been conducted on the effects of the Transcendental Meditation program on hard criteria of corporate output or profits. By comparing highly similar subsystems within an organization—such as bank branches or chain stores, where one or more business unit(s) receive the intervention and control unit(s) do not—one can "wash out" variables such as size, technology, work force characteristics, physical environment, job design, and autonomy (Porras & Berg, 1978). Using control units would provide adequate sample size to permit quantitative analysis and thereby achieve a level of experimental rigor not available in case studies.

Both quasi-experimental and case research suggest that a sufficient number of people in an organization practicing the Transcendental Meditation technique bring about a change in the "corporate consciousness," defined by Gustavsson and Harung (1994, p. 3) as "the collective consciousness of an organization, the wholeness that is formed by the members of an organization coming together." The cases found that practice of the Transcendental Meditation technique by large numbers of employees improved the work climate, reflected in greater creativity and harmony, and indicated that work climate improvements may also have contributed to improvements in performance at the corporate level. It would be useful to investigate the effects of the Transcendental Meditation program on corporate climate in greater comprehensiveness and depth than has yet been done.

The findings are consistent with Maharishi's original prediction that development of consciousness by a sufficient proportion of a social system can influence the quality of life of the whole system. Interestingly, research in larger social systems, such as communities or cities, suggests that even a very small subset of the population can enhance the quality of life of the larger system, as seen in indicators such as decreased crime rate (e.g., Dillbeck, 1990). Verification of such a multiplier effect in an organizational setting would indicate a profound causal role for consciousness in organizational functioning and have important practical ramifications as well.

CONCLUSION

The research on the Transcendental Meditation program in business challenges the current emphasis on improving business functioning through exogenous efforts to change structure, strategies, or skills. This one simple mental technique is seen to influence both individual and social functioning and may also influence organizational variables. This suggests that development of the abstract, inner value of consciousness can have far-reaching practical implications for business and industry. If further research bears this out, then we may have found a way not only to understand but also to catalyze growth of consciousness in organizations.

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