

# Tuning down with TM

By Maggie Scarf  
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By Maggie Scarf

It was a Saturday morning, and I was going to get my mantra. "Does this handkerchief look absolutely fresh and like it's never been used before?" I asked, hurrying into the kitchen where my 15-year-old daughter, Susie, sat drinking coffee with her best friend, Patty. "I don't know," said Susie with a shrug, looking at the starched white square. I already had my fruit—two big apples and a tangerine—wrapped in Saranwrap and set aside. The only other thing that I needed was a bunch of fresh flowers—six, to be exact. I hastened out into the back garden to retrieve six of the last of the autumn's hardy chrysanthemums, which had all been laid flat by a violent rainstorm the night before. I brought the bouquet into the kitchen, picked off the brown petals of the flowers and wrapped the stems in foil. "What is your mother doing?" my daughter's friend asked.

"She's going to get her mantra."  
"Yes," I put in briskly. "It's my word. It's in Sanskrit. It's the thing, you know, that I'm supposed to say to myself when I'm meditating."

"Oh." Patty's face was expressionless; but a moment later, when I was in the hallway getting my coat, I heard her murmur something in a low voice. Both girls started laughing. I went out of the house, slamming the door behind me irritably.

I was feeling cranky—partly because I'd slept badly, from thinking about today's initiation ceremony. And then my husband had been ragging me about my interest in transcendental meditation. Just before bedtime, he'd asked me slyly: "What do you think your mantra will be? Will it be 'Ommmmmmmmmm'?" "No," I'd replied, "'Ommmmmm' is a mantra for mystics."\*

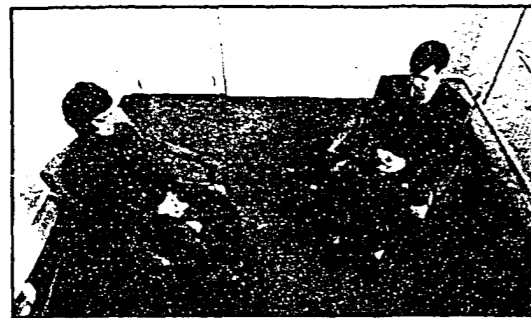
"Well, what do you think yours will be?"  
"A mantra for housewives, I imagine. Probably something like 'Blehhehheh.'"

"Are you going to tell me your mantra when you get it?"

"No, of course not. You can't tell anyone your mantra; you know that."

"Oh." He'd grinned at me. "Then you really do believe in it."

Did I "believe" in TM? As I parked my car in the lot behind Yale's Hendrie Hall, which houses both part of the Music School and the New Haven SIMS-IMS (Students' International Meditation Society-International Meditation Society) center, I wondered whether anything would indeed "happen." Would I, after today's instruction in meditation, experience some altered state of being—or at least new feelings, new sensations? Certainly a growing number of friends and acquaintances were reporting to me that they had. A respectably hard-headed Yale social scientist had told me that



The author meditates with her teacher, John Lewis.

meditation was not only a pleasant experience in itself, but that it dissipated his tensions, made him feel far more relaxed in general and also seemed to give him added energy and alertness.

A senior editor in a New York publishing house had spoken of TM in terms of release of stress and had added that she often entered states of great exaltation as well. She had, however, to be careful not to meditate more than the prescribed 40 minutes per day; otherwise she found herself experiencing mild hallucinations ("Not frightening ones; just flowers and birds and fountains. But I don't like having it happen"). A man I'd sat next to at a dinner party had said that, for some incomprehensible reason, meditating made him feel far less anxious. There had to be something to TM—or at least it had to be the best kind of snake oil ever.

In any event, if I could be seen as somewhat gullible, I had the consolation of being one among some 400,000 similarly gullible Americans. For, although the movement is worldwide, embracing some 60 countries, its largest following is in the U.S.A. There are now 350 TM centers scattered throughout the nation, where roughly 10,000 new meditators—including businessmen, housewives, students, athletes, doctors, nurses—receive instruction each month. Since the late nineteen-sixties, TM has evolved from what was primarily a student movement into a far more establishment-oriented organization. Its sympathizers and followers include the director of training for the American Telephone & Telegraph Company, the vice president of the Crocker National Bank in San Francisco and the commandant of the U.S. Army War College.

At the same time, it remains highly visible on hundreds of college campuses, where courses on TM and on the "Science of Creative Intelligence" (this is, supposedly, a systematic, scientific analysis of the physical and mental phenomena associated with meditation) are or have been offered for credit. The TM organization itself operates three permanent teacher-training academies—two in California, one in New York State—and is in the final stages of purchasing the old Parsons College

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campus in Fairfield, Iowa, as the site of its own Maharishi International University.

The movement is, in other words, a thriving and growingly "respectable" one. What accounts for its success? What reservoir of inner needs are the TM leaders and teachers tapping—and what are they actually doing for the people who come to them and who do seem to find some kind of satisfaction? What, in short, is meditation all about?

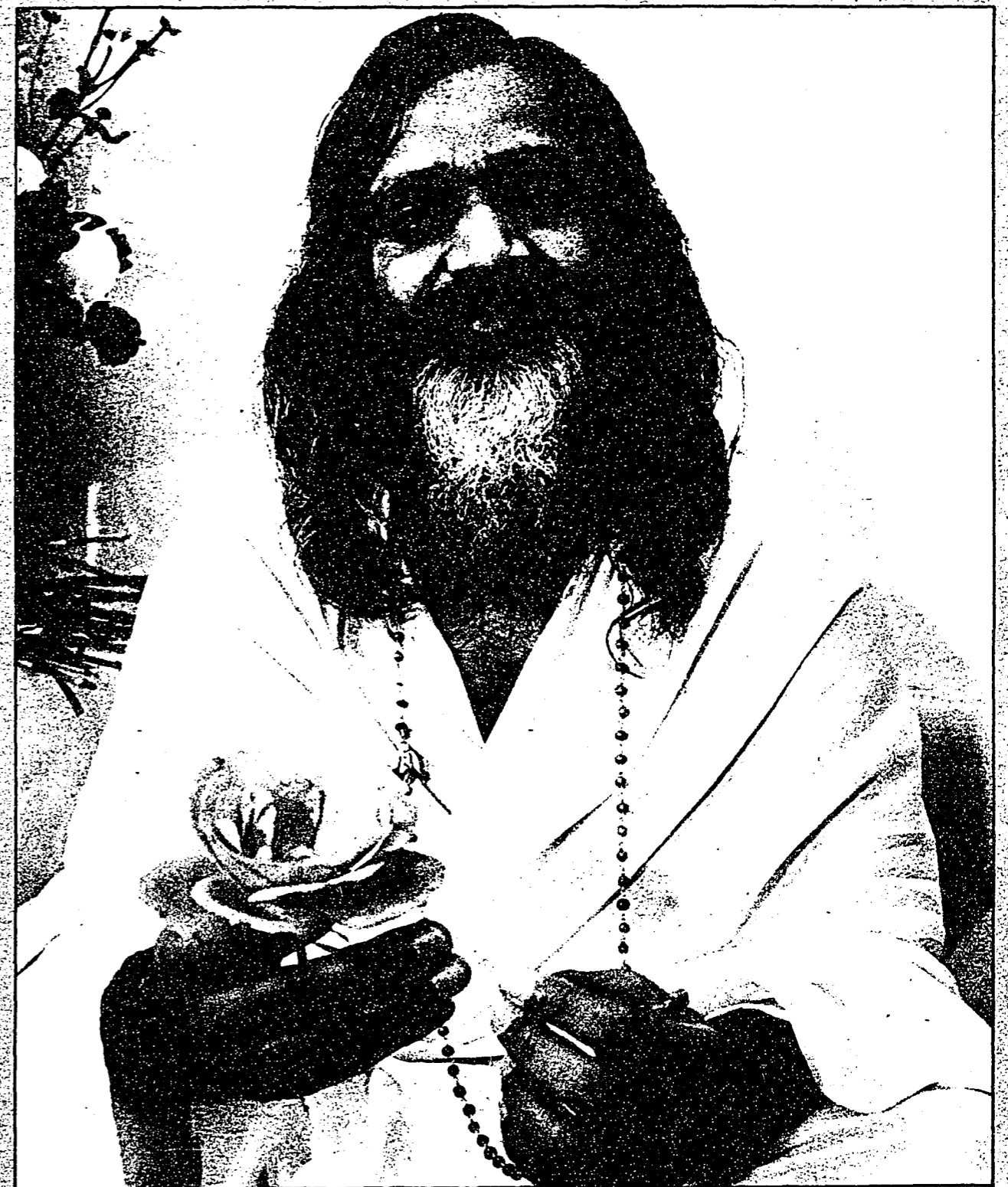
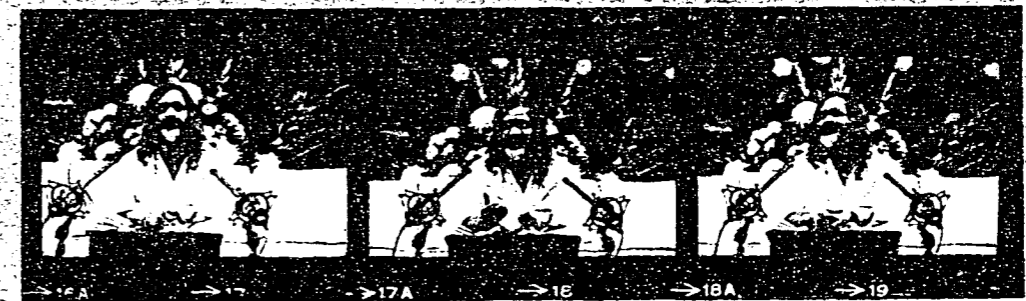
Transcendental meditation is not a religious movement or practice, though it is often easy enough to mistake it for one. It may more aptly be described as a technique, a fairly simple sort of procedure. The technique derives, according to the Maharishi Mahesh Yogi, founder and leader of the TM movement, from certain aspects of the ancient Vedic tradition of India. Maharishi, whose exact age is uncertain—"A monk does not meditate upon his own life," he has said—imbibed the Vedic teachings during a 13-year sojourn in the Himalayan foothills. During this period, he apprenticed himself to the sage, Swami Brahmananda Saraswati, Shankaracharya of Jyotir Math—now known to Maharishi's followers as the great teacher and "grandfather" of the movement, Guru Dev.

It was to Guru Dev, as a matter of fact, that my flowers, fruit and handkerchief were being brought. They were to be used in a "ceremony of gratitude" to him and to the other Vedic masters who had passed down knowledge of the ancient practice. (This was, as I and the rest of the people attending the lectures had been advised, a totally nonreligious event.)

The thanksgiving ceremony was in Sanskrit and took place in front of a makeshift altar above which hung a portrait of Guru Dev. While my initiator, John Lewis, murmured unintelligible phrases, I stood to one side, holding a flower and feeling silly. At the conclusion I was given my own mantra—a sound in Sanskrit, meaningless to me, but supposedly carefully chosen as suitable for my particular nervous system—and to my astonishment found the sound objectionable. The idea of disliking my own mantra struck me as funny: I felt myself on the verge of laughter. But my teacher was earnestly explaining the meditation procedure to me. (John Lewis is one of a handful of paid instructors working at the New Haven SIMS-IMS center; many of the workers there are Yale student volunteers, and the premises are occupied rent-free—because TM is a Yale student organization.) I managed to restrain my mirth sufficiently to listen to John and then to follow his directions. We meditated together for 10 minutes.

Then, he left the room and I meditated alone for 10 minutes.

To my surprise, I began responding immediately. The hysterical urge to laugh receded; I started breathing deeply and began sinking into a restful, almost "floating" state. I wondered, even as I experienced a sort of calm emptiness, whether this could be a placebo re- (Continued on Page 52)



Maharishi Mahesh Yogi, founder of the TM movement.

\*The syllable "om" is a mantra representing the three component parts of the cosmos.

action on my part. I felt funny, tingling sensations in my jaw, and this seemed an odd coincidence—my jaw is one place that usually gets taut when I feel generally tense. And there was a similar, small tingle in a particular back muscle, a muscle I had been aware of only twice before in my life—both occasions when it had knotted into a painful ball following upon an acutely stressful incident. Did this tingling represent, then, the "release of stress" that the TM people had said one was very likely to perceive physically? It was certainly strange that the tingling should occur in those particular places. . . . That first session ended with a huge yawn. I felt refreshed and relaxed.

I had been intrigued, ever since the first two "introductory" TM lectures, by the series of charts that depicted the alterations in body metabolism and in brain-wave patterns which meditating was purported to bring about. The charts, I had noticed, were reprinted from such impeccable sources as *The American Journal of Physiology*, the *British Medical Magazine*, *Lancet* and *Scientific American*. One of the researchers who appeared to have been involved in the TM studies from the very outset was Herbert Benson, a cardiologist on the Harvard faculty. I telephoned Dr. Benson to ask whether I might come to talk with him but found him oddly reluctant. "I don't want to be involved in any article which will be either 'pro' or 'anti' transcendental meditation," he said.

I assured him that I was neither trying to sell, nor crusading against, the movement—and it was on this basis that he agreed to an interview.

Dr. Benson, who is in his late 30's, is an associate professor of medicine at Harvard and director of the hypertension section at Beth Israel Hospital in Boston. His interest in the bodily effects of meditation—an integrated set of physiological reactions he now subsumes under the term "relaxation response"—was awakened during the late sixties when he was studying the relationship between cardiovascular functioning and the emotions. "Of course, it was well-known at

the time — and had been known for many years—that many of the problems that heart doctors encounter have been created by daily stresses and tensions—the cost, so to speak, of living at an often hectic pace in a highly complex society. But the particular question that I and the people working with me were interested in exploring was: 'How do factors that are psychological in nature come to exert these physical effects upon the heart, blood pressure and other aspects of circulatory-system function?'"

Benson and his colleagues embarked on a series of experiments, using monkeys as subjects, to ascertain whether or not high blood pressure (or "hypertension"; the two terms are interchangeable) could be induced in the animals by behavioral means. Using a technique which would "feed back" to the subjects information about the rise or fall of their own blood pressure, Benson and his collaborators trained the monkeys by systematic "rewards" and "punishments" to make their blood pressure move up or down. "We trained the animals, in other words, to control their own blood pressure. Not only could the high blood pressure be produced in the first place. We were able to teach them to lower it as well."

The effort to lower blood pressure by means of biofeedback and conditioning techniques was then repeated, this time with human beings as subjects. In the human studies, subjects were rewarded with scenic color slides (worth about a nickel apiece) which they "earned" by lowering their blood pressure. They, too, were able to learn to do so, but the puzzle was, just how? Unlike the monkeys, the people could be asked about this directly — and when they were, most of them seemed to feel that they did it by "thinking relaxing thoughts." "This made me wonder," related Benson, "why we should be playing with the costly biofeedback equipment. I mean, if this were the case, why not go directly to the 'relaxing thoughts?'"

Even prior to the studies with humans, the transcendental meditation people, hearing of his research interests, had approached Benson and asked him to study them.



While his subject meditates, Dr. Herbert Benson measures her oxygen consumption and takes an electrocardiograph reading.

They were confident, they said, that they were able to control their own blood pressure and were eager to demonstrate this in controlled scientific experimentation. "At first I didn't want to get involved with them," Benson said, smiling. "The whole thing seemed a bit far out, and somewhat peripheral to the traditional study of medicine. But they were persistent, and so finally I did agree to study them."

While Dr. Benson was beginning his preliminary studies of the physiological effects of meditation, a graduate student at U.C.L.A., Robert Keith Wallace, started doing very similar kinds of research while working toward a Ph.D. in physiology. Before long, the two scientists had become aware of their overlapping interests, and Wallace came to work with Benson at Harvard's Thorndike Memorial Laboratory. The first order of business was to establish that there were physiological responses to meditation which were distinct and different from the sort of bodily responses which might result from a person's simply sitting very quietly, for an extended period of time, with eyes closed.

In order to ascertain whether or not there was a measurable difference between what happened in these two conditions, the meditator-subjects were asked to sit quietly for a period of 20 to 30 minutes, then to practice meditation for another 20 to 30 minutes and then to sit quietly once again for the

same period of time. Each meditator served, therefore, as his or her own "control." Devices for continuous measurement of heart rate, blood pressure, rectal temperature and skin resistance were attached to the subjects, as were electrodes for monitoring brain-wave activity.

The meditator was seated in a comfortable chair. After an initial 30 minutes to allow getting used to the instrumentation, measurements in the "pre," "during" and "post" meditative periods were taken. "What we found," said Benson, "was that during the meditation itself there were distinct changes. The essence of these changes could be, I think, summarized by saying that the whole body's metabolism slows down. And it slows down to a degree that would be seen otherwise only after several hours of sleep. In this case, however, the changes occur within a few minutes of starting what I now like to call the 'relaxation response.'"

During sleep, continued Benson, there is a drop-off in the rate of oxygen consumption, a drop-off which occurs at a very slow pace. During meditation, the same drop-off occurred, but within three minutes. This decline in oxygen consumption was nothing short of dramatic: Among a group of 20 subjects, average oxygen consumption fell from 251 cubic centimeters per minute to 211 cubic centimeters during the meditation period and afterward rose again to 242 cubic centimeters. These figures repre-

sent a decrease in oxygen consumption of some 16 per cent—twice the reduction that is known to take place after five hours of sleep (or about 8 per cent). "Now there are very few ways in which oxygen consumption can be voluntarily decreased so rapidly," noted Benson. "You can't do it by holding your breath and other such methods, because your tissues will continue to take up oxygen at the same rate—you'll then expel a great deal of carbon dioxide on the next outbreath and need to take in more air on the next inhalation. So you see that what this decreased need for oxygen reflected was an essentially involuntary reduction in the rate of body metabolism."

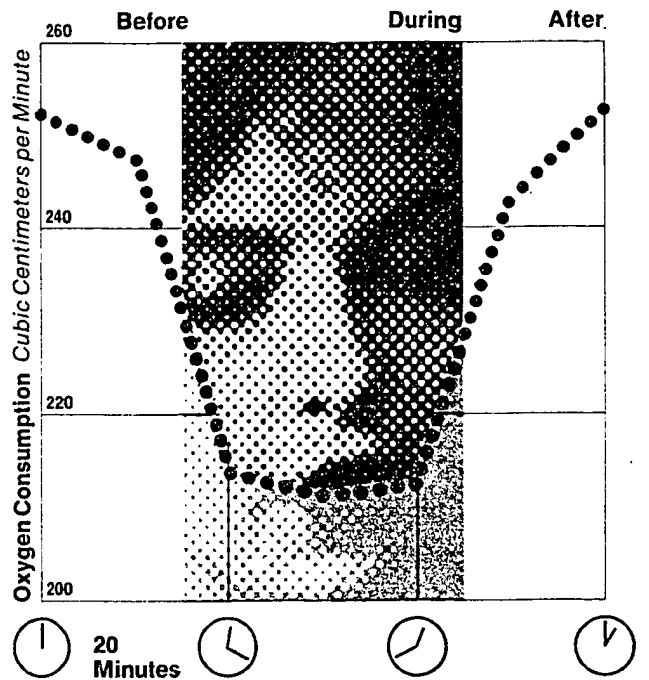
Generally speaking, it is true that the more effort one expends, the more oxygen one consumes. A person who is standing uses more oxygen than a person who is sitting; someone running uses more than someone who is walking. The respiration rate corresponds to the amount of "work" being performed. What was striking was the difference between the oxygen consumption of an individual who simply sat quietly, eyes open or closed, and of a person who was meditating or invoking the "relaxation response." "In the latter case," according to Benson, "we saw not only the marked decline in respiration rate but a number of other distinct physiological changes as well."

"Skin resistance, for example, rose. This, too, is known to occur during sleep . . . but during meditation it

increased by an amount and at a rate never seen in sleep. Actually, no one has an explanation for what's happening in skin resistance, except that it's measurable, and that a number of people have associated a decreased resistance with 'being more nervous.' The idea is that you sweat more when you're feeling upset, and so it's easier for an electric current to pass across your skin—whereas if you're feeling relaxed, your skin is drier and higher resistance is offered to the current."

Another and very striking physiological correlate of meditation was the decline in the level of blood lactate (a chemical which circulates in the arterial system), which tended to fall precipitously within the first 10 minutes after the subject had begun to meditate. This was particularly significant because, as the work of psychiatrist Ferris Pitts Jr. and his colleagues at the University of Washington had demonstrated, patients hospitalized with anxiety neurosis show a large increase in lactate when they are exposed to stress. Injections of this blood chemical, moreover, can bring on anxiety attacks in such patients—and can cause anxiety symptoms in "normal" persons as well. Interestingly, people with hypertension show higher lactate levels when they are resting than do persons without hypertension when they, too, are at rest.

The words "at rest" are important here, because the concentration of lactate in the blood decreases when an



In 20 cases, average oxygen consumption fell from 251 to 211 cubic centimeters during meditation, then returned to normal.

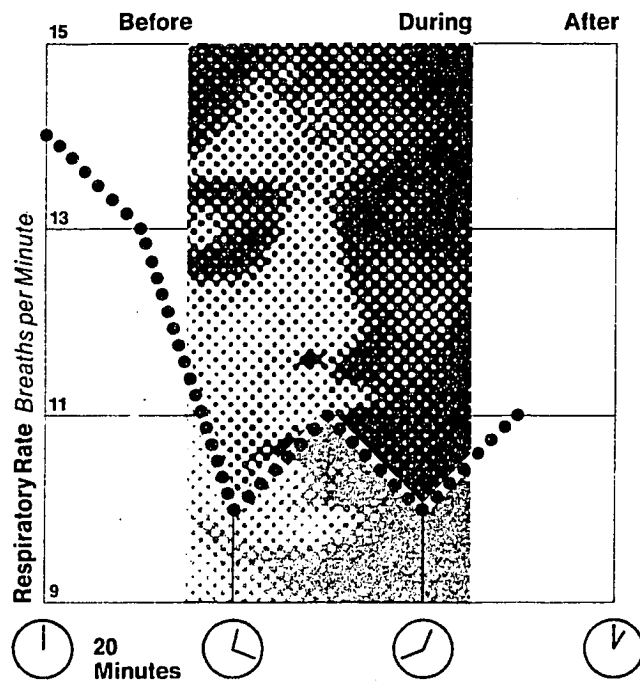
individual is resting quietly in a comfortable position. But, during meditation, the rate of decline was more than three times faster than normal. And postmeditation the blood lactate level tended to remain lower than it had been prior to the meditation session.

Brain-wave configurations as well were consistent with a state of deep and complete relaxation. EEG readings tended to be in the alpha—9 to 12 cycles per second—"resting" range with rhythmical theta waves—6 to 7 cycles per second—occasionally appearing. (Such brain-wave patterns appear to correlate with subjective reports of "being relaxed," "peaceful," "floating," "feeling very pleasant," etc.). "The whole picture that emerged," Benson told me, "was that of a general quieting or damping down of the sympathetic nervous system."

"But could one achieve the same sort of effect through hypnosis?" I asked.

He shrugged briefly, then said this question was currently under investigation. "Naturally the hypnotic subject's physiological state will correspond to the emotional meaning of whatever is being suggested to him or her," Benson said. "If you tell a person that he's about to be assaulted, he'll show distinct 'fight or flight' responses. If you tell him that he's feeling peaceful and lolling on a beach in the Caribbean, you'll see physiological changes that correspond to that deeply relaxing set of circumstances. As a matter of fact, some work from other laboratories has indicated that the physiological changes seen in hypnosis when deep relaxation is suggested are akin to the changes seen during the elicitation of this wakeful resting state."

However, what Benson had been searching for at the outset—that is, a means of lowering blood pressure without pills—did not appear to be provided by meditation. For during the meditative period, the subjects displayed no appreciable changes in their blood pressure. "A question then arose," Benson said, "concerning what these people were studying had been like before they started TM, because they were all long-term practitioners of meditation. And so a group of us set up an experiment in which the subjects were people who suffered from hypertension but had never practiced any form of meditation. We measured blood pressure in those subjects on



The respiration rate of a subject sitting quietly fell sharply when meditation, or the "relaxation response," was practiced.

a daily basis, both for a period of time before they learned TM, and for weeks and months afterward. And what we found was that, yes, there were decreases that took place in the blood pressure; but these had nothing to do with the meditation session per se. The blood pressure was simply lower across the board. There had been a carry-over from the meditation, which could be measured at any point during the day. The decrease wasn't, by the way, curative; pressure was simply somewhat lowered. And the fall was very clearly related to meditation. Because in cases where the person, for one reason or another, stopped the practice, his or her blood pressure began climbing again—and was usually right back where it had initially been within the space of three weeks."

In 1971, writing in *The American Journal of Physiology*, Benson, Wallace and a third colleague, Archie F. Wilson, suggested that the pattern of physiological responses generated by meditation could be seen as a "wakeful hypometabolic state"—that is, a bodily state which bore some resemblance to sleep inasmuch as there was a "tuning down" or quieting of the sympathetic nervous system, but which was different from sleep in that the individual remained conscious and aware of his or her surroundings. (A while later, Wallace was to go further and to suggest that the changes occurring during meditation actually imply the

existence of a fourth state of consciousness — the others being waking, sleeping and dreaming.)

The following year, writing together in *Scientific American*, Benson and Wallace raised the hypothesis that the physiological changes generated by TM might be part of an integrated response mediated by the central nervous system. As such, it might perhaps be regarded as the direct opposite of the "fight or flight" response first described by physiologist Walter B. Cannon in 1914. This so-called "defense alarm" reaction is, of course, the complex set of visceral changes which ensue when a human being, or lower animal, perceives a situation of threat. These changes include an elevation in heart rate and blood pressure as more blood flows to the muscles of the arms and legs (to promote running or fighting), a rise in oxygen consumption as bodily metabolism moves into high gear to meet the emergency, the release of sugar stores into the bloodstream to provide extra energy, and the stepped-up secretion of adrenalin to help mobilize a host of other "crisis" resources as well. (For example, the spurt of adrenalin entering the bloodstream causes the pupils of the eyes to dilate; an individual can literally see better when under stress.) These elaborate physiological changes, elicited virtually instantaneously by situations which are seen as menacing to the organism's integrity—situations which, in human

terms, can range anywhere from an insult from one's mother-in-law to circumstances involving genuine physical danger—are brought about through an arousal of the sympathetic nervous system.

The pattern of changes generated by meditation, suggested researchers Benson and Wallace, represented an equally interrelated, though diametrically opposed, set of responses. The "fight or flight" situation mediated a hyperactivation of the sympathetic nervous system; meditation caused a quieting, a tuning down. A crucial difference between the two physiological reactions was, however, to be noted: While the "emergency response" could be and was elicited spontaneously in a wide variety of situations, the "relaxation response" needed cultivation. It had to be consciously and conscientiously elicited.

At this point, the thinking of Benson and Wallace began to diverge markedly. Wallace, already deeply committed to the transcendental-meditation movement, was convinced that Maharishi's method — which involved the use of a mantra which the meditator was enjoined never to reveal to anyone—was the one method capable of evoking the "wakeful hypometabolic state." As Benson saw it, however, the mantra was a good enough device for meditation, but it could not be seen as being more useful than any other sound, word or phrase used in the same fashion. He could not concur in the TM people's assertion that meditating with a sound other than one's "appropriate" mantra might have disorganizing effects upon, and cause damage to, the central nervous system.

"The basis on which an individual mantra is deemed 'appropriate' for a particular person is one of the well-kept secrets of the TM movement. No one knows how many of the ancient mantras in existence are used by TM initiators, or the method they use in assigning them. There has been some suggestion that the choice is based on a simple formula combining factors like age and sex. But as a fellow meditator remarked to me, age couldn't be a real factor since the mantra is meant to serve the individual for a lifetime. This person, who taught his wife to meditate with an invented mantra, is convinced that all mantras are simply nonsense words, combining vowels and soft consonants. His mantra, he told me daringly, begins with the "sh" sound; mine, I confessed, begins with an "h." Both of our mantras end in "m" and both consist of two syllables. Similar mantras might be sounds like "resh-shom" or "shah-rahn."

And, while the TM procedure constituted a valid means of eliciting the deeply restful "relaxation response," it was by no means the only procedure capable of doing so.

Transcendental meditation is, clearly, only one among a variety of meditative techniques. There are a multitude of Eastern religions and daily practices—including Zen and Yoga, with their many variants—which can evoke similar states of profound physiological relaxation. Some, quite similar to the TM method, employ the repetition of a sound or word or phrase; others use exercises or rhythmic breathing to exclude meaningful thought and banish distractions. One Zen Buddhist practice, Zazen, combines two of these approaches: Inhalations and exhalations are coupled with rhythmic counting. In time, the meditator ceases counting to "follow the breath" to achieve a state of no thought, no feeling, of being in "nothingness."

In the Western world, meditative practices have been associated with religious practice — most commonly with mystical trends within the major religions. A 14th-century Christian treatise, for example, counsels the reader that in order to attain union with God, all distractions and physical activities, all worldly things (including thoughts) must be eliminated. As a means of "beating down thought" it is suggested that a single-syllable word, such as "God" or "love," be repeated over and over again. "After that," writes the

anonymous author, "if any thoughts should press upon you . . . answer . . . with this word only and with no other words."

Another Christian meditative practice, developed within the Byzantine church, was known as Hesychnasm. This involved a method in which breathing out gently was to be combined with the repetition of the prayer "Lord Jesus Christ, have mercy on me." The meditator using this method of prayer was instructed to ". . . say it moving your lips gently, or simply say it in your mind. Try to put all other thoughts aside. Be calm, be patient, and repeat the process very frequently . . ."

In Judaism, similar practices date back to the earliest forms of Jewish mysticism and became an important part of the cabalistic tradition. In the 13th century A.D., when the Rabbi Abulafia published his major works, he described a mystical system in which he methodically contemplated the letters of the Hebrew alphabet which form God's name (YHWH). The purpose of this prayerful contemplation was that of passing beyond normal sensory and emotional experience to a transcendent state of consciousness.

Similarly, the basic elements necessary for eliciting the altered internal state are found in the Shinto religion of Japan, in one of the traditional religions of China — Taoism—and in Islamic mysticism or Sufism. According to Dr. Benson, meditative practices are found in practically

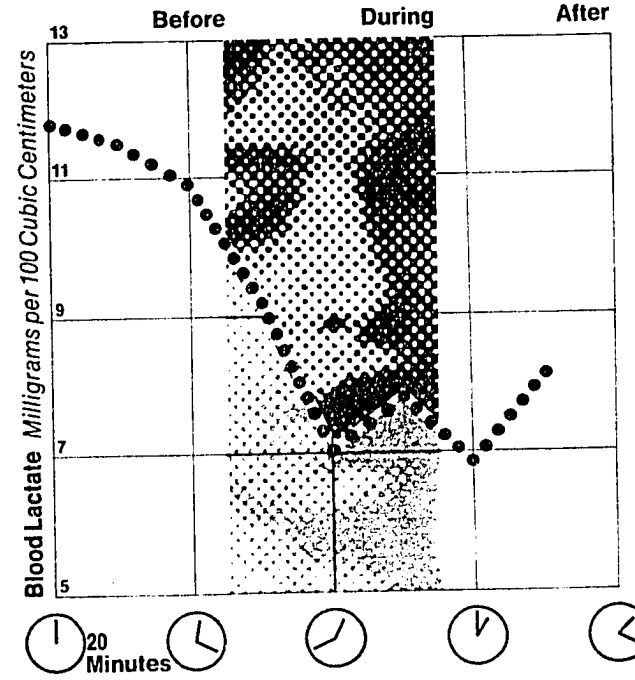
every culture of man, and they have been developed within secular contexts as well. "We see the same sort of things in the writings of the so-called nature mystics," he observed. "Wordsworth believed that anyone could deliberately induce a 'happy stillness of the mind' through a deliberate relaxation of the will. Tennyson, as his son later revealed, was able to induce altered states of consciousness through a steady repetition of his own name."

The instructions given to the TM novitiate were not, Benson noticed, basically very different from those used in many other meditative procedures. Most techniques appeared to include four essential ingredients: A quiet, calm environment in which to elicit the response; a passive attitude, which involved not trying to "force" anything to happen; a comfortable position, so that one's muscular activity would be reduced to a minimum, and a mental device. This could be a single-syllable word or sound, which was repeated over and over again, either silently or in a low, gentle tone. (The purpose of the repetition was that of halting meaningful mental activity.) All that was necessary in order to evoke the deeply restful "relaxation response" was, he speculated, to position oneself in these ways and to meditate upon the word of one's choice.

To test this supposition, Benson drew up a simple set of laboratory instructions. He wanted to see if, simply by following these rules, naive subjects would be able to elicit the restful "wakeful hypometabolic state." The instruction list, which he later described as a "simple, mental, noncultural procedure," read as follows:

- "In a quiet environment, sit in a comfortable position."
- "Deeply relax all your muscles, beginning at your feet and progressing up to your face — feet, calves, thighs, lower torso, chest, shoulders, neck, head. Allow them to remain deeply relaxed."
- "Breathe through your nose. Become aware of your breathing. As you breathe out, say the word 'one' silently to yourself. Thus: breathe in . . . breathe out, with 'one.' In . . . out, with 'one' . . ."
- "Continue this practice for 10 to 20 minutes. You may open your eyes to check the time, but do not use an alarm. When you finish, sit quietly for several minutes, at first

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Though rest normally produces a decrease in the level of blood lactate, the decline is three times faster during meditation.

with your eyes closed and later with eyes open."

These instructions, though not identical to those received during training in transcendental meditation, are quite similar to them.<sup>3</sup> Benson's guidance sheet contains additional tips: "Remember not to worry about whether you are successful in achieving a deep level of relaxation . . . permit relaxation to occur at its own pace. When distracting thoughts occur, ignore them and continue to repeat 'one' as you breathe. The technique should be practiced twice daily, and not within two hours after any meal, since the digestive processes seem to interfere with the elicitation of the expected changes." An arresting footnote is the comment that "people who are undergoing psychoanalysis for at least two sessions a week experience difficulty in eliciting the response."

The efficacy of his laboratory procedure was tested in a controlled study of 17 healthy subjects, and Dr. Benson published his findings last spring in the journal *Psychosomatic Medicine*. In this experiment, the subjects—people who had never practiced any kind of relaxation technique—were given the instruction sheet and allowed an hour to familiarize themselves with the method and practice it. Each individual was then studied for five consecutive periods of 12 minutes each.

During three of the periods, the subject sat quietly and read material selected for its emotional neutrality—excerpts from the book "Navajo Wildlands." During the fourth period, the subject was instructed merely to sit with eyes closed. During the fifth period, the subject was asked to follow the instructions for the relaxation technique. (These experimental periods did not follow this order in every case but were organized in different sequences.)

"What we found," said Benson, "was that, using the number 'one' instead of the mantra, we could produce essentially the same physiological changes that were produced during transcendental meditation. For example, the mean oxygen consumption when the subject sat quietly and read 'Navajo Wildlands'—which is to say, during the



control period—was 258.9 milliliters per minute. When the same individual sat quietly with his or her eyes closed, there was no significant change from that control value. But during the time when the relaxation technique was being practiced, oxygen consumption fell to 225.4 milliliters per minute—a decrease of 13 per cent." The respiratory rate decreased 4.6 breaths below what the control values had been.

Benson's current feeling about transcendental meditation is that it is quite as good as any other relaxation technique, including his own laboratory method—and that it may be better for individuals who need personal instruction to get themselves started, post-instruction "meditation checks" to keep themselves going, and the support of an organized group. What the TM movement has done essentially, he believes, is to isolate and attractively package for the modern consumer a practice available throughout the ages but more traditionally within a religious context. "What we have done, as a society, is to turn our backs on these traditional modes of achieving states of relaxation," he remarked. "At the same time, the stress of living in a complicated society, with a multitude of anxieties and pressures, involves the frequent elicitation of 'fight or flight' responses. Since, very often, there's no way for the individual to discharge that physiological-arousal state (because it is socially unacceptable to do so), there may be a chronic rise in blood pressure—that is, hypertension. And high blood pressure is an important, if not the most important, predisposing factor to heart attack and stroke."

This is among the many reasons why Dr. Benson believes most of us should be practicing one relaxation method or another as part of our daily routine. He cautioned, however, against

the use of TM or his own laboratory procedure as self-treatment for chronically high blood pressure. Decreases in blood pressure must be effected under the careful supervision of a physician. "I'm frightened," he said, "of people starting to elicit the 'relaxation response' and then getting the idea that it's all right to throw their medications away on that basis."

There appears to be little threat of other dangers or undesirable side effects from the regular practice of meditation or self-relaxation—unless one evokes the response beyond the suggested two brief periods a day. "Overmeditating" in this fashion is considered unwise.

"If done excessively for weeks on end," Dr. Benson observed, "it can lead to hallucinatory or dissociative states." Dr. Benson's ideas and researches in this entire area are more fully presented in his forthcoming book "The Relaxation Response."

**I**t is now about a month and a half since I began the practice of transcendental meditation. I reserve 40 minutes daily, 20 in the morning, 20 in the evening before dinner, for meditating. On occasion, I also invoke my mantra if I'm too wakeful at bedtime; I find it a highly effective sleeping pill. (Using one's mantra for sleep is, by the way, frowned on by the TM people; they insist that one should meditate for energy and activity.)

My husband also meditates regularly; he uses the Benson laboratory method, which he says is quite effective. I wonder occasionally how long the two of us will keep it up. Will we, a year or so from now, still be scrupulously setting aside time for meditation amid the demands of the busy day? A number of people have warned me that, though they themselves began as avid meditators, they found it easy to drift off from the practice. One acquaintance said she had

stopped meditating shortly after moving to New Haven: She found life there so much less stressful than in New York. "And besides," she added, "I'd only started to meditate because of the excruciating lower-back pains that I suffered—and meditation had already cured them. In fact, it was the strangest thing; I'd begin to meditate and then, around 10 minutes into the period, I'd feel all those tense muscles go 'blop'."

My own responses to meditation have changed and intensified somewhat since that first training session: I now rarely experience those strange, tingling sensations, but I do find that, some 15 minutes after the start of the 20-minute session, tears start to trickle down my cheeks. These tears are not accompanied by feelings of sadness; they are like the tears one weeps when slicing onions. Each session still ends with one or more enormous yawns. The most notable change resulting from these relaxation periods is that I feel much less wound up, much calmer. If I were an oven, I would say that my temperature had been turned down from 500 to 375 degrees.

My only problem with TM is trying to explain it to friends and acquaintances. Those of more mystical and religious inclination insist that I cannot divorce meditation from its theological and metaphysical origins. They look shocked when I reply that to me it's no more than a terrific aspirin, a wonderful kind of bromide. My more rationalist, outer-reality-oriented friends seem to think, on the other hand, that I've adopted some strange set of beliefs and now imagine myself to be experiencing "physiological reactions" for that reason. With these people I hear myself sounding embarrassed and apologetic.

Recently, I was quizzed very closely about exactly what I had paid for. Was it the instruction or the mantra? Exactly what had I got for my money? "I suppose," I admitted, feeling my cheeks redden, "that, looked at with hindsight, it was simply my mantra that I bought." This was met with a silence, so I laughed and added: "I guess it sounds pretty silly, doesn't it, paying \$125 for a nonsense word?"

But to my surprise my questioner shook her head in disagreement: "Not at all; I think it's a bargain. Look at me. I've been in analysis four days a week, at \$50 a time, for the past year. And my therapist still hasn't come up with my nonsense word!" ■

<sup>3</sup>The only tangible difference between the two techniques is that in TM one is not asked to pay attention to one's breathing. One simply "thinks" the mantra. If thoughts drift elsewhere, one is advised simply to let them return to the mantra effortlessly.