## A NEW BEGINNING

In my end is my beginning.

T. S. Eliot

H ave you ever concluded a project—or thought you had—only to change your mind later? All those feelings you had at the time—premature in retrospect—were genuine: typically relief, mixed (one hopes) with a measure of contentment, though mingled with sadness. It can be hard to say good-bye to ideas and characters with whom you've shared so many hours. Conclusion and closure bring rewards, but also a sense of loss. That is how I felt when I completed *Transcendence*, a book that—like the present one—deals with the Transcendental Meditation (TM) technique and its effects. I thought I had said everything I had to say on the subject.

But I was wrong. T. S. Eliot, quoted above, was wiser: "In my end is my beginning." Exactly so.

I had come full cycle once before with regard to TM. I first learned the technique back in South Africa in the early 1970s, but in the helter-skelter of daily life I let it fall by the wayside. Thirty-five years later (in 2008), challenged by a young patient to renew my TM practice, I did so and have been meditating regularly ever since. After observing beneficial effects of meditation in myself—such as decreased anxiety and reactivity—I began recommending the technique to some of my patients. Many experienced results that were equally impressive—or even more so. After delving into the literature on TM, I was so impressed with its many benefits that I felt compelled to write about it—and do so, once again.

Although both *Transcendence* and *Super Mind* explore the effects of TM, the earlier book dealt mostly with its documented benefits on physical and

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emotional health, especially in people with problems such as anxiety, depression, addictions, and post-traumatic stress disorder. In contrast, this book explores not only the advantages that TM can bring to your task-driven life, but how it can actually result in a new state of consciousness—a word that may seem troublesome to a scientist, but seems perfectly apt for the experiences I will describe.

The founder of TM, Maharishi Mahesh Yogi, outlined several states of consciousness—the three widely acknowledged states (sleeping, waking, and dreaming), and four others, which are summarized in in table 1 below and presented in more detail in the notes.<sup>1</sup>

# Table 1: The Four Higher States of Consciousness (According to Vedic tradition)

Stage 4: Transcendence—the experience of the Self in the silence of meditation.

Stage 5: Cosmic Consciousness—the experience of the transcendent in activity—traditionally used to express the state in its fully realized, continuous form.

Stage 6: Refined Cosmic Consciousness—a state in which the development of the senses and emotions are at their maximum.

Stage 7: Unity Consciousness—a state in which you experience the transcendental reality not just within yourself, but within everyone and everything.

I will discuss transcendence (the fourth state) in some detail in chapters 4 and 5, and Cosmic Consciousness (the fifth state) in its fully realized form in chapter 18. When it comes to stages of consciousness beyond stage four (transcendence), however, I will speak of them collectively as "Super Mind"—a term that seems well suited to our present frenetic and interconnected era. Indeed, in these stressful times we need to have all our neurons, synapses, and brain circuits at our disposal. I selected the term "Super Mind" because it describes an experience of not only heightened aptitude and problem-solving ability but also a state of emotional sensitivity, empathy, perspective, and diplomatic skills. It is the mind in peak condition, not just momentarily—as we have all experienced—but with a consistency that tends to grow over time.

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I first began to get a glimpse of this state in myself and some of my patients soon after publishing *Transcendence* (in 2011), I continued to meditate, and after some time, a new and utterly unexpected set of developments began to unfold, both within my meditating patients and myself. These developments fell roughly into two categories. The first I can best describe as everyday changes in awareness or consciousness: Feelings of stillness, expansiveness, boundlessness, and peace, formerly confined to my meditation sessions, began to seep into my daily life. For a while after meditating, I would sense a pleasant glow about me—and others would notice it.

"You've been meditating, haven't you?" one knowledgeable friend remarked. Or, as I would talk with a patient or colleague about feelings that arose during meditation, I would feel myself slipping into that state of inner expansive calm, often at the same time becoming even more engaged in the conversation. As with so many other experiences I have had that seemed at first unique to me, I later found that this phenomenon—stillness in the presence of activity—is commonplace among long-term meditators.

In tandem with the development of expanded consciousness, my life started to improve in many ways (the second set of changes). And once again, these shifts turned out to be typical in people who have been meditating for months to years—although, as you will see, dramatic changes sometimes occur within days of a person's very first TM session. I will elaborate on this subject later. At this point, let me say simply that life became easier and I became happier—both of which were apparent not only to me but to my family, friends, and even colleagues. It is these two sets of changes—developments in consciousness in tandem with improvements in many aspects of a person's life—that I am collectively calling the Super Mind.

# THE SCIENCE OF CONSCIOUSNESS

Consciousness is the only real thing in the world and the greatest mystery of all.

Vladimir Nabokov

At the time when the Beatles were visiting Maharishi, I was plowing through medical school. As most medical students can testify, there was and is a great deal to learn, not all of it interesting or even relevant to one's later professional life. Many details that I learned I have long since forgotten; others, no more important, tenaciously stay put. I enjoy, for example, strange-sounding words—so I may never forget the zonule of Zinn or the canal of Schlemm, both obscure but important structures in the eye. Likewise, Latinate terms seem to cling to my neurons—the "substantia nigra" and "locus coeruleus," for example, meaning, respectively, "black stuff" and "purple dot," both small but crucial regions of the brain.

But when I ask myself, what did I learn about *consciousness* at medical school? The answer is, not very much. Our generic patient was either conscious, unconscious, or somewhere in between—concussed, stuporous, obtunded. My psychiatric training was likewise lacking. We did, of course, learn about sleep with its various stages and maladies, and we attended lectures on hypnosis. We also learned about mood, anxiety, and other disorders listed in the latest manual of psychiatric ailments. We were taught to inquire about people's thoughts, dreams, and feelings, and even to make some attempt to understand where they came from and how best to deal with them. As I think about it, though, all of this learning involved the *contents* of consciousness—the subject matter, if you will—not consciousness itself. Consciousness as a topic for study and understanding was not on the menu.

## MODERN SCIENCE

In reading the excellent comprehensive review *Consciousness and the Brain* by neuroscientist Stanislas Dehaene, professor of experimental cognitive psychology at the Collège de France, I found that my South African colleagues and I were not alone in those benighted times. According to Dehaene, the word "consciousness" was banned from scientific discourse when he was a student in the 1980s. At that time, as Dehaene put it, "I was surprised to discover that, during lab meetings, we were not allowed to use the C-word. . . . And then in the *late* 1980s everything changed. Today the problem of consciousness is at the forefront of neuroscience research."

A great deal has been written about consciousness, much of it of a speculative and philosophical nature, asking questions such as "Who exactly has consciousness?" Daniel Dennett raises this question in his encyclopedic book *Consciousness Explained*: "Do newborn human babies?" he asks. "Do frogs? What about oysters, ants, plants, robots, zombies . . .?" In this book I will avoid venturing into such heady terrain. As a psychiatrist and researcher, I am more inclined to the empirical approach adopted by Dehaene and his colleagues.

Dehaene summarizes three fundamental elements that have enabled the transformation of consciousness from a "philosophical mystery into a laboratory phenomenon." These elements are: "The articulation of a better definition of consciousness; the discovery that consciousness can be experimentally manipulated; and a new respect for subjective phenomena."

Let us say that an image is flashed on a screen in front of you—very briefly, so it's below your detection threshold; you will (by definition) be un-able to see it. Another way of masking an image so you cannot detect it (even though it is flashed in front of you) is to pair it with distracting images. In contrast, as you can imagine, that same image could be flashed in front of you for a longer duration or without distraction, in such a way that you could both see it and report on its presence.

Researchers have in fact conducted studies in which they presented images in these various ways and measured people's responses, both in terms of subjective reports (what people say they saw) and specific brain changes (for example, EEG and imaging methods). Then, by correlating subjective reports with brain measurements, scientists have been able to establish four EEG signatures that signal consciousness. These are shown in table 2 (below).

As for Dehaene's third element—a new respect for subjective phenomena—

most psychiatrists would probably say, "About time." Clinicians have depended on patients' reports of their conscious experiences since therapy (or medicine, for that matter) first began—sometimes with excellent results.

The table below details four signatures of consciousness, EEG patterns showing that a person's response to a stimulus is consciously experienced.<sup>3</sup>

The researchers have a simple way of determining whether subjects experi- ence stimuli consciously or not: they ask. The resulting EEG tracings are measured by electrodes glued to the scalp.

### TABLE 2: FOUR EEG SIGNATURES OF CONSCIOUSNESS

- 1. The EEG response becomes amplified and involves many brain regions. Based on the differences between EEG responses to a subliminal stimulus (one that is registered unconsciously) versus a consciously perceived stimulus, researchers have compared the impact of these two events to that of a snowball (the unconscious stimulus) versus an avalanche.
- 2. The EEG response to stimuli exhibits a wave form with several bumps in it, rather like a row of rolling hills. Only during con-scious trials (where the subject is aware of the stimulus) do re-searchers observe an especially large third hill—the so-called P300, which often starts around 300 milliseconds after the stim- ulus is presented.
- 3. During conscious trials, the EEG shows "a massive increase in gamma-band power starting at around 300 milliseconds." During unconscious trials, this fast-frequency wavelength gen- erally fades within 200 milliseconds after the stimulus.
- 4. When stimuli are consciously registered, there is invariably a "massive synchronization of electromagnetic signals across the cortex." Information that reaches the level of consciousness is judged by the brain to be especially important. It therefore makes sense that different brain regions shout out to one another at the same time.

If you have enjoyed these chapters please consider purchasing, "Super Mind"







