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how the relationship between mind
and body suggests a revolutionary
approach to the drug problem

The Natural Mind

Andrew Weil, M.D.

with a new preface by the author

The Natural Mind

*An Investigation of Drugs
and the Higher Consciousness*

Andrew Weil

With a new preface by the author

REVISED EDITION



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Books by Andrew Weil, M.D.

THE NATURAL MIND

An Investigation of Drugs and the
Higher Consciousness

THE MARRIAGE OF THE SUN AND MOON

A Quest for Unity in Consciousness

FROM CHOCOLATE TO MORPHINE

Everything You Need to Know about
Mind-Altering Drugs (*with Winifred Rosen*)

HEALTH AND HEALING

Understanding Conventional and
Alternative Medicine

NATURAL HEALTH, NATURAL MEDICINE

A Comprehensive Manual for Wellness
and Self-Care

SPONTANEOUS HEALING

How to Discover and Enhance the Body's
Ability to Maintain and Heal Itself

EIGHT WEEKS TO OPTIMUM HEALTH

A Proven Program for Taking Full Advantage
of Your Body's Natural Healing Power

Preface to the 1998 Edition

IT IS A GREAT SOURCE of satisfaction that *The Natural Mind*, my first book, originally published in 1972, is still used in college courses on drugs and drug policy and continues to exert influence on how people think about psychoactive drugs and altered states of consciousness. I am also dismayed that our society still clings to useless notions about drug use, imagining that it can solve the drug problem by trying to make disliked drugs and their users go away.

In recent years, my professional work has focused on health and healing, and in particular, the development of new educational models for the training of physicians. When I am interviewed by the media on these subjects, reporters frequently ask pointed questions about my earlier work, thinking that I might wish to disown *The Natural Mind* and the two books that followed it. Far from it. The philosophy of my first book is the same philosophy that underlies my writing about health. Just as *The Natural Mind* argues that highs originate within the human nervous system and are elicited or triggered by drugs, so my later works propose that healing responses originate within us and can be elicited or triggered by treatments applied. In fact, the seed of my thinking about conventional and alternative medicine can be found in chapter 7 of this book.

At this remove, *The Natural Mind* seems like an old friend. I am very pleased to see it out in this new edition.

Tucson, Arizona
January 1998

Preface to the Revised Edition

READING OVER this book in order to bring it up to date left me feeling that I should explain its tone. To do so I must describe the circumstances of its creation.

The Natural Mind is a product of the sixties. It grew out of experiences I had in college and medical school in Boston from 1960 through 1968 and during a medical internship in San Francisco the following year, when streets and campuses were battle zones. Though written in 1971 and first published in 1972, the book embodies the spirit of the preceding decade and the generation that came of age in it, full of optimism, righteous anger, and openness to change.

Just before I started writing I spent a frustrating year working at the National Institute of Mental Health in a suburb of Washington, D.C. I was serving military time in the Public Health Service, wanting only to avoid political confrontations. This was 1969, however, the first year of Richard Nixon's presidency, when social turmoil and polarization were increasing daily. The National Institute of Mental Health was caught up in the storm, and despite my best intentions, so was I. My administrative superiors came to regard me as a political liability. They opened my mail, tried to prevent legislators and reporters from reaching me, and threatened to send me to Vietnam if I did not behave.

The problem was marijuana, then as now a red-hot issue because of its countercultural symbolism and associations with "undersirable" elements of society. I had designed and carried out laboratory studies of marijuana with human volunteers — some of the first research of its kind — in my senior year of medical school. The results were published in leading journals in 1968 and

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1969 and got a great deal of publicity, including front-page coverage in the *New York Times*.

I had also used marijuana myself in order to know its effects firsthand. The conclusions I came to about it were sound, but they did not support the establishment view of the drug as an unmitigated threat to mental health, more menacing than alcohol. I published my findings in the naive belief that honest information on the subject would help resolve the acrimonious debate that was tearing families and communities apart. For the first time in my life I found that telling the truth got me in trouble. My employers did not want the public to know what I had discovered about marijuana, and they resented all the attention my published work continued to receive.

By the end of the first half of what was to have been a two-year stint as a Federal employee and commissioned officer, my working life in Washington had become intolerable. I was typed as a rebel and troublemaker, was barred from doing any work related to marijuana or other drugs, then was ordered to move to the Federal addiction hospital in Lexington, Kentucky, to work as a ward doctor for heroin addicts. I refused to go. Eventually, I resigned job and commission and was denied military credit for the year I had served. I applied for deferment as a conscientious objector, but stated that I would not do any alternative service for a system that seemed to me committed to dishonesty.

My first act as an unemployed ex-official of the U.S. government was to go off to an Indian reservation in South Dakota to study with a Sioux medicine man. I wanted to learn from him about herbal medicine and about ways of changing consciousness without drugs. On the reservation I participated in sweat lodge ceremonies, grew a beard, and "dropped out." When I returned to my house in rural northern Virginia, I found my draft board had granted me conscientious objector status without a hearing. Suddenly and unexpectedly, I had no obligations and nothing but free time. Over the next year (1970-71), I started to practice yoga, experiment with vegetarianism, and learn to meditate. I also reflected on events of the recent past and began to write.

What I wrote was the original edition of this book, now in its second decade in print. The context of the writing influenced its tone, which flashes anger in spots and delights in sniping at such institutions as universities, professional medicine and psychiatry, and, of course, the National Institute of Mental Health. I have not altered tone or style in preparing this edition. I have made a number of textual changes in the interest of accuracy, reflecting what I have learned since 1971.

If the book's style now seems to require explanation, I am gratified that the content withstands the test of time, even though much has happened in the interim with regard to drugs and consciousness. No one in 1971 foresaw the epidemic of cocaine use that now prevails, for example, or understood cigarette addiction to be the hardest of all drug addictions to break and our most serious public health problem. Few people believed that alternative medical treatments would become as popular as they are now, or that scientific study of body-mind interactions would ever become respectable. No one knew about endorphins, the morphine-like molecules made in every human brain that serve as our own internal narcotics. None of these changes and discoveries are inconsistent with the ideas in the book; in fact, all follow logically from them.

At the time of its first publication *The Natural Mind* drew much praise for its original and radical insights. It also drew harsh condemnation from a few prominent critics within the medical establishment who saw it as an apology for drug use. They misread my arguments and attacked me for saying that human beings are born with a need to use drugs. What I wrote was that human beings are born with a drive to experiment with ways of changing consciousness. Drugs are but one of many possible techniques, having their own risks and limitations. The idea that it is normal to seek changes in consciousness has never been discredited.

The Natural Mind argues that high states originate within the human nervous system rather than in any external substances. Research on endorphins and other neurochemicals strongly supports this theory. The book also insists that such states have great positive potential, a suggestion confirmed by demonstrations of

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the power of the mind, when not in its ordinary mode, to modify functions of the body and counteract disease. I have developed and explored that theme through the intervening years in my own investigations and writing. My later books — *The Marriage of the Sun and Moon* (1980), *Chocolate to Morphine* (1983), and, especially, *Health and Healing* (1984) — all expand on it.

Over the years I have received many comments from readers of *The Natural Mind*. Most frequently, readers tell me that the book articulates ideas they have had and makes them feel better about themselves, specifically about their interest in experiencing other forms of consciousness, which they had learned to regard as abnormal and unhealthy. These comments reveal the burden imposed on individuals by our culture in its failure to come to terms with the human need for variations in conscious experience.

If I were to write *The Natural Mind* today, it would be much shorter. I would omit a lot of the argument and focus on the new way of thinking that is the heart of the book: The root of the drug problem is the failure of our culture to provide for a basic human need. Once we recognize the importance and value of other states of consciousness, we can begin to teach people, particularly the young, how to satisfy their needs without drugs. The chief advantage of drugs is that they are quick and effective, producing desired results without requiring effort. Their chief disadvantage is that they fail us over time; used regularly and frequently, they do not maintain the experiences sought and, instead, limit our options and freedom.

What I mean by the “new way of thinking” in the book concerns conceptual models. I believe that we cannot know reality directly through intellectual activity. Instead, we construct models or paradigms of reality through which we interpret and make sense of our experience. There is much talk these days of “paradigm shifts” and conflicts between proponents of alternative models in many fields of human activity, from physics to medicine to the social sciences. Alternative models are neither right nor wrong, just more or less useful in allowing us to operate well in the world and discover more and better options for solving problems.

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The Natural Mind suggests a new model for solving the drug problem and other problems like it, all of which will continue to worsen until we change old conceptions. The new model I propose postulates that consciousness is central and primary. This reversal of the prevailing scientific view (which sees consciousness as secondary and peripheral to material reality) changes conventional ideas of cause-and-effect relationships. Furthermore, the new model substitutes "both/and" formulations for the "either/or" formulations of the old model, opening more possibilities for personal freedom, reducing the discomfort of existence, and making life much more creative.

That is the essence of *The Natural Mind*. Its message is as timely now as when it first appeared, since the need to rethink basic conceptions about drugs and consciousness is as urgent now as ever.

Tucson, Arizona
May 1985

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What This Book Is About

THIS BOOK IS AN EXPOSITION of a theory that can help us. It is not a primer of pharmacology or a program for social reform. Rather, it is the germ of a new way of thinking about drugs and consciousness — a way that creates possibilities for solving a problem that divides us bitterly in our nation, in our schools, and in our homes.

I have been actively interested in drugs that affect the mind for the past ten years, and during that time I have had many opportunities to write this book. I have declined to do so until now for a number of reasons that are pertinent to the ideas I intend to develop in these pages. Before I discuss them, let me state briefly why I now wish to write.

The growing presence in our midst of chemicals that seem to alter consciousness raises questions of the utmost importance for us as individuals and as social beings. Examples of these questions are: What do these drugs tell us about the relationship between mind and body? Are they legitimate tools (in any sense) for changing the mind in a direction of greater awareness? How can a society come to terms with the individual urge to alter awareness? These questions are important because they bear directly on the nature of consciousness, which is, ultimately, the only problem worthy of total intellectual effort. It is the concern of all the world's philosophies and religions, other problems being

less precise statements of the same thing. All of us are working on the problem of consciousness on some level, and the conclusions we come to determine what we think about ourselves and the universe, how we live, and how we act. The complex phenomena associated with drugs in our country seem to me to be significant pieces of evidence to be taken into account in this process — clues to help us in our work whether we use drugs or not. It would be useful to have this evidence presented clearly and unemotionally.

In directing attention to matters of consciousness, I am not ignoring or minimizing the very real problems associated with drugs. Our news media are full of documented reports on the tragic consequences of the misuse of chemical agents in search of highs. But having acknowledged the reality of these problems, I propose to find solutions to them by looking to the positive aspects of drug experience rather than to the negative ones (which are visible all around us). By *positive* I mean simply “tending in the direction of increase or progress” rather than the reverse, and I will attempt to justify this methodology in the course of the book.

During my years as a drug expert (a role I now cheerfully abandon) I have sat through a great many conferences about drugs attended by all sorts of people, but I have never heard the important questions given the attention they deserve. Instead, I have listened to pharmacologists arguing over changes (or possibly no changes) in the chromosomes of rats exposed to LSD, to users rambling on about the purely hedonistic aspects of drug experience, to physicians pretending to themselves that medical science can explain the subjective effects of drugs, to parents and educators begging for methods to make youngsters turn away from drugs, and so on and so on. These discussions have been emotionally

charged, but the intellectual level has been uniformly low, whether the participants have been psychiatrists or addicts, students or policemen. I have waited for years for the talk to get around to the interesting questions, but it never has. Nor does it look as if it will. Consequently, I have resolved to stop going to drug conferences and to write instead.

In addition, I have collected an unusual body of information on this subject that I feel obligated to share with people who are interested in the meaningful questions. Through a series of coincidences I have had a chance to look at drugs from the point of view of a journalist, a user, an ethnobotanist, a physician, a laboratory pharmacologist, a "drug abuse expert," and a Federal government employee. No one of these viewpoints by itself enabled me to understand what I saw or to come to any useful conclusions. But gradually, from all the experiences I have had in these diverse positions, certain unifying themes have emerged. And to my great surprise, the principles that I have begun to discern leave me profoundly optimistic about the possibility of extricating ourselves from the desperate situation we now find ourselves in. In the following chapters I will describe how I have arrived at certain conclusions and will go into some detail about the reasons for my optimism.

Among the considerations that have kept me from writing until now, the emotionalism of the subject has been uppermost in my mind. Drugs are not an emotionally neutral topic of discourse. There is no such thing as a disinterested drug expert, despite the stance of many scientists who claim to be presenting purely objective information. This is so precisely because the issues raised by drugs touch so closely upon our profoundest hopes and fears. Everyone who speaks

or writes about drugs (and certainly all who "investigate" them) together with everyone who hears or reads what is said and written has an emotional involvement with the information. The exact nature of this involvement differs from person to person in both degree and quality, but it is always there. Consequently, it is extremely difficult to talk about drugs except in a direct interpersonal situation, where, at least, there is some possibility of monitoring emotional reactions.

In the course of my writings and lectures I have learned that people hear what they want to hear and tune out what they do not want to hear.* I have also observed that the distortions of communication caused by emotional investments in preconceived notions are most damaging in groups that regard themselves to be free of such notions, such as physicians and pharmacologists.

Where a topic provokes emotional reactions, one may expect to see a closely related process of polarization in which

* Here is one example of what I mean. In April 1970 Dr. Norman Zinberg and I published in the British journal *Nature* a paper titled "A Comparison of Marijuana Users and Non-users," based on interviews with students we had conducted in the Boston area in 1968. The point of the article was that no personality differences were detectable between people who used marijuana recreationally and people who did not in the student communities we studied. We took this finding as an indication of how widespread use of the drug had become — so much so that it cut across all categories; in other words, students who used marijuana could not be differentiated from other students except by their use of marijuana. By way of comparison we included data on a group of "chronic users" of drugs — that is, young men who identified themselves as members of the drug subculture. Here, we did find distinguishing characteristics (such as a sense of alienation from the dominant culture). In a paragraph of minor importance to the whole paper, we wrote of these chronic users: "There were no signs of overt intellectual deterioration." As a result of a typographical error, the word *no* was omitted in the article as it appeared in *Nature*. Despite the fact that the sentence as printed made no sense, contradicted the rest of the paragraph, and had nothing to do with the paper as a whole, the *Washington Post* ran a major story the following day under the headline: DAILY POT-SMOKERS ERODE IN INTELLECT, RESEARCHERS CLAIM.

divergent interpretations of data develop. The controversies that divide us over drugs illustrate this process well, for they are not so much battles over observations as battles over the significance to be attached to observations. No careful observer doubts that heavy marijuana smoking correlates with an "amotivational syndrome" characterized by lassitude, indifference, and a neurotic inability to accomplish things society considers important. But as soon as we try to interpret that correlation we run into trouble. Is heavy marijuana smoking a cause of amotivation, as many psychiatrists tell us, or is it simply another manifestation of an underlying (and unknown) psychological process? At every turn in our examination of observations concerned with drugs, we are forced to choose between rival interpretations. What are the real facts?

The answer, very simply, is that there are no facts. Or, more precisely, there are no facts uncontaminated by some degree of value judgment. Of course, the greater the emotional investments (or biases) of the participants in this muddle, the greater will be the degree of contamination. I cannot emphasize too strongly that everything we hear and read today about drugs is affected in this way; all facts about drugs are merely masquerading as such. Nor can I repeat too often that the problem is likely to be most serious in just those cases where it appears to be absent. As I shall show in a later chapter, the pharmacologist who "just gives the facts" about LSD, heroin, and marijuana is often interpreting data through the distortions of biases so sweeping and so internally consistent that they remain invisible and unconscious.

These considerations place serious obstacles in the way of anyone who wants to understand what drugs mean. To get

by them, we must be carefully discriminating about the information we choose to build theories on. A useful first step is an attempt to estimate the degree and kind of bias present, a practice that should become habitual. To check on the extent of conscious bias, one might ask oneself, Does the person giving me this information have any special case to make for or against drugs? In most instances today the answer will be yes. Law enforcement officers have a personal stake in making drugs look bad; regular users have a personal stake in making them look good. This is garden-variety bias and requires no special aptitude to spot; you just have to remember to ask the question. An affirmative answer does not mean that one should ignore the information, only that one should be alert to the possibility that observations have been interpreted one way rather than another on the basis of relatively meaningless criteria.

Unconscious bias is harder to detect and much more important to try to identify. The question to ask is, Does the person giving this information view the subject from a special perspective that might limit the validity of his generalizations? Unconscious bias is as common among proponents of drugs as among opponents. Here are two glaring examples, one from each pole. When I was conducting human experiments with marijuana in Boston in 1968, a Federal Narcotics Bureau agent told me that no matter how my experiments came out, he would remain convinced that "marijuana makes people aggressive and violent." My research had nothing to do with that possibility, but I asked him what his evidence was for his belief. He had one piece of evidence dating from the early 1950s, when he had been seized by a curiosity to watch people smoke the drug. (His official duties were exclusively concerned with large-scale