

Science, Mysticism and Psychopharmacology

MAX HAYMAN, M.D., *Los Angeles*

■ *Historically, psychopharmaceutical agents have been used to produce a mystical state with the religious connotation of "a union with Divine Nature" or of "oneness with God." Such transcendental states are also known to occur in starvation, self-flagellation, Yoga and various psychoses.*

A common psychological origin is suggested for these states, in which there is a psychic regression to an early phase of development. This genetically is the phase wherein the infant is still united with the mother and has not yet established the boundaries between the "self" and the "not-self." In a subtler form, the desire to regress to this phase may be a universal yearning which affects the physician, the investigator and even the manufacturer of drugs. Accordingly, we have a profusion of tranquilizers, euphorants and ataractics the prescription or the investigation of which may give vicarious pleasure and relief of tension to the physician and scientist by a process of identification with the person receiving the drug.

Mankind's quest for psychic development is difficult and precarious, alternately marked by progression and regression. Excesses in the use of drugs are indicated as regressive in nature.

IN THE TEN YEARS since its graduation from a neologism, the word psychopharmacology has developed a staid respectability and the new discipline it heralded may well be opening a new era of psychiatry.

Historically, the use of drugs is as old as the records of man himself, and if we go back into antiquity we find that drugs have been used notably for the production of a mystical state, with the religious connotation of a union with the Divine Nature. We read of the worship of liquor in the Dionysian rites⁵; and peyote^{19,21} and hashish have been well known in mystic rituals. It is said that the whole Rig Veda is a collection of hymns for soma worship.¹⁴ There are other equally effective ways of inducing a transcendental state, including starvation, self-flagellation, isolation, active torture and psychosis, none of which is recommended by psychiatrists as therapeutic.

The drugs mentioned, and many others as well, have been used to produce a great variety of psychic phenomena, including religious ecstasy, hallucinations and sometimes, unconsciousness. Bromides, manganese, insulin and pentylenetetrazol are only a few of the many drugs which have had their psychopharmacological era.

A fairly generally accepted definition of science is that it is the collection and collation of facts, bearing in mind that facts sometimes are difficult to determine objectively. Mysticism, however, is so intensely subjective that a general definition could probably not be arrived at; however, it connotes a "union of the self with a larger-than-self, be it called the World Spirit, God, the Absolute, or otherwise."¹⁴ Further, it may be called "a merging of the individual will with the Universal Will, a consciousness of immediate relation with the Divine, or an intuitive certainty of contact with the supersensual world."¹⁴ Such "transcendental" states have been called the "sense of oneness with the world," "the sense of Universal identity," "the final stage of Samadhi of the Yogi,"²¹ or sometimes "the unity with God" of the earlier Christian mystics. There are common features here with the effects of drugs which suggest a common psychological origin, and it will be our task to try to determine what the common origin may be. Currently, we do not see such famous mystics as St. Paul, St. Francis of Assisi, St. John of the Cross, Madame Guyon, and Eckhart^{14,18}; but recurrences of mysticism still appear, as in certain sects of recent origin, and some of the periodical evangelical revivals. It is generally true that the more advanced the religion, the less regard its votaries

have for mystical states; and it is in the more primitive peoples, and the more primitive areas of our civilized countries, that mysticism and the religious ecstasies that go with it still flourish.⁵

While this Grand Mysticism is no longer so frequent, there is another type, which I prefer to call neo-mysticism, current in our times. Since it is couched in scientific terms and often associated with the use of newer drugs such as the hallucinogens and tranquilizers, it is much more subtle than its predecessor. When, after a single dose of a drug, one hears such phrases as "The integrative function of the ego was enhanced"; when patients say they have had "a great awakening" or they are "more tolerant, more peaceful, and know better the difference between right and wrong"; when, in addition, they report they "have seen the white light that means the nearness to God," or they feel "I am the world and there is no absolute me or absolute others," then one suspects that neo-mysticism is at work either in patient or therapist. In the last half century of psychiatric investigation, there have been many drugs and various procedures^{11,23} for which high proportions of cures were claimed. Usually these claims gradually dwindle, and it is the beginning of the end of their reign of popularity when the literature begins to report of them that "the greatest use of the drug is to facilitate psychotherapy." Mystical beliefs and not scientific adherence, may be the determining factors in the investigations.

Eons of Bliss . . . In a Single Hour

Aldous Huxley, gifted writer that he is, is perhaps the unwitting spokesman of this neo-mysticism. His observational data on the effects of mescaline are both valid and fascinating. Since he touches on the domain of science, however, we have the privilege of turning as fine a scientific microscope as we have on his writings, and on his interpretations.

He says,⁸ "The experience of self-transcendence and the release of tension produced by alcohol and the other consciousness-changing drugs is so wonderful, so blessed and blissful, that men have found it quite natural to identify these drugs, to which they owe their momentary happiness, with one or other of their Gods." Further, he says: ". . . the pharmacologists will give us something that most human beings have never had before; if we want joy, peace and loving-kindness, it will give us loving-kindness, peace and joy. If we want beauty, it will transfigure the outside world for us and open the door to visions of unimaginable richness and significance. If our desire is for life everlasting, they will give us the next best thing, eons of blissful experience, miraculously telescoped into a single hour . . . Human

From the Alcoholism Research Clinic, Department of Psychiatry, UCLA Center for the Health Sciences, Los Angeles; Compton Foundation Hospital (Vista Hill Psychiatric Foundation).

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beings will be able to achieve effortlessly what in the past could only be achieved with difficulties by means of self-control and spiritual exercises."

Even the most intrepid psychopharmacologist must quail at such a task. The foregoing excerpt from a paper appears to describe a universal longing, enchantingly expressed by a creative and imaginative writer. And yet, the paper was presented before the New York Academy of Science.⁸

Peace of Mind for Sale

There seems to be no area where the peace-of-mind purveyors fear to tread. I quote from advertisements of some manufacturers of tranquilizers: "Does your child sleep poorly at night? Does your child have anxiety? Is he homesick because of vacation, or entering school?" (The answer to your problems is in a little pill.) "Are you afraid of impending or realized parenthood? Do you have financial worries? Are you unable to relax? Do you have family tensions produced by accidents, weddings, funerals, temporary or permanent family separations, and differing opinions?" (Do not let it worry you—the answer is in a little bottle.) "Are you anxious over interviews or competitive examinations? Do you worry about public appearances? Are you an actor or actress, radio or television announcer, or performer? Are you an executive at business meetings, a toastmaster, a master of ceremonies? Are you a minister, teacher, professor, or politician? Are you in the newspaper field, or in advertising? Or are you an excitable athlete?" All the answers are supplied—with special doses for children under three. But from three to one hundred and three, your life's anxieties are apparently over.

The popularity of one drug reached such an unusual pitch that when it became scarce the eagerness and avidity for it was equalled only by the intense drive for meat ration points in World War II. Disproportionate claims and methods of exploitation of a few manufacturers of tranquilizers have been considered in an editorial by Kline.¹² However, the demands for tranquilizers and other drugs have not been due to any one group, and it appears likely that often pharmaceutical houses, doctors, and patients alike have all been influenced by the same basic need for "tranquilization."

Investigative Work

There is considerable valuable investigative work going on with the hallucinogens, tranquilizers and newly discovered body chemicals which should not only be continued but expanded. A review of over 200 papers on LSD-25 and mescaline¹⁵ and related compounds gives an interesting account of the fact, fiction and fantasy involved in experimental studies

of these drugs. Whatever the mode of action, there is probably one factor that is common to most. This is the regressive feature of these drugs. With few exceptions—and here we include hashish, peyote, stramonium, and other drugs used to induce the mystical state, as well as LSD-25, chlorpromazine and the other tranquilizers—there is some inhibition of cortical or subcortical functions. This regression varies in depth from drug to drug and varies with the psychological state and the personality structure of the individual. In some drugs there are stimulatory factors as well as inhibitory, but generally, in the regressive states induced, there is paralysis of the higher functions with the appearance of archaic or infantile attitudes and reactions.

It is helpful here to recall the writings of Hughlings Jackson,²² as brilliant and valid today as when he wrote many years ago, of the hierarchy of physiological levels with the appearance of more primitive responses as the higher centers become impaired. Regression, however, is not restricted to the use of certain drugs. The psychiatric literature is replete with evidence of regression, complete or partial, in response to psychic and physical traumata—brainwashing, the privations of war and imprisonment and, as recent work has shown, sensory isolation. All of these may produce the phenomena of regression and more primitive modes of response. And where regression is the greatest there is the most intense infantile drive for dependency and for reunion with the powerful, protecting parent.

Through the descriptions of the peyote ritual, the historical records of the mystery Eleusinian rites,¹⁶ and the descriptions of the ultimate union with Brahman of Yoga, runs the theme of unity, of the part that joins the whole, of the yearning to be lost in something greater, stronger, more powerful, more expansive. It is likely that in every era, every land, every religion, this yearning is present, and there are innumerable evidences of it present in our current culture as well.

The Subjective and the Objective Effects of Mescaline

So now let us return to Huxley's admirable description of a mescaline experience.^{9,10} He reports that visual impressions are greatly intensified, that interest in space is diminished, and interest in time falls almost to zero. He describes a feeling of detachment from the things of the world. He speaks of the conviction of the subject that experiences under mescaline are "better." There is a heightened sense of beauty, described with words like "grace" and "transfiguration." He further describes the separation of the word concept from the thing-in-itself, which he says has now the quality of "suchness" and

which I will call concrete as opposed to the abstract. The subject, he says, has lost his "Self-ness" and now becomes the "Not-self," and now has the experience of "Mind at Large."

Let me add a few other observations. Mescaline will often produce euphoria or depression or alternation of these. There is often an exaggeration of the usual personality trends, and anxiety frequently occurs. Inhibitions are diminished and early memories may appear. Depersonalization phenomena are frequent. The essence of this state, Huxley says, is "the sense of One-ness, the reconciliation of opposites, the transcending of the subject-object relationship, the sense of universal life, the sense of intense gratitude for being alive, the sense of the beauty and mystery of the world, the sense of the absoluteness of phenomena, the infinity of the finite, the eternity of transient moments."

If we now examine this description, substituting for the more mystical, the more objective scientific attitude, it seems apparent that Huxley has given a rather good description of the unconscious, as it has been delineated in our psychiatric textbooks. Our vocabulary is somewhat different. We speak of the primary process, the fusion of self and not-self, the replacement of concrete for abstract concepts, the timelessness, the absence of verbal symbols. We would say that here is described the earliest infantile states, where the newborn child begins to experience both internal and external stimuli, from the comforting security of its mother's arms. It does not yet differentiate the I from the You and is still part of the limitless expanse of its own world, which of course encompasses the mother. We know that each experience, each stimulus, each trauma, each sound and sight impels a differentiation on the child from its mother, and thereby establishes its separateness. Indeed, these are the very factors which create the ego from its matrix. "I was seeing what Adam had seen on the morning of his creation—the miracle, moment by moment, of naked existence," reports Huxley of his mescaline experience. Could anyone better express regression to the neonatal period from which stem the fantasies of rebirth, reincarnation and perhaps redemption?

Many gifted people with channels of communication to the unconscious adequately open, can express these feelings more or less directly in great works of art, literature and religion. Others can experience these feelings only indirectly, perhaps through identification and empathy. But a communication with the unconscious is emphasized here, not a surrender to it. Surrender leads to a disintegration of the ego, in whole or in part, and we are beginning to accumulate data on such occurrences following the use of LSD-25.³

Aspects of Regression

We recognize that there are various phases in the states of regression induced by LSD-25 and these may be established anywhere along the line of the hierarchical psychodynamic development of the individual. Furthermore, there may be regressive symptoms or signs from every level of the hierarchy simultaneously. From the clinical point of view we may have states of depression, ecstasy and depersonalization and the picture of hysterical, obsessive-compulsive or psychotic disorders. We are here concerned with the ultimate stage of regression, the earliest infantile state and the "oceanic" feeling described in psychopathological works. It has not been mentioned so far, but it is important to note that the fear of such regression may also be very terrifying, and intense anxiety states frequently develop. Not only is there the desire to be incorporated in the whole, but also there is the terror of being swallowed up, and of the ego being annihilated.⁶ Again, as Huxley describes it, "there is a Hell, as well as a Heaven," and I might add, there is the goddess Kali of Destruction as well as the goddess Demeter of Beneficence and Creation.

Those who have taken LSD (as the author has) or mescaline, can often perceive the regressive features of the reaction because a part of the ego remains intact and judgmental. If we have correctly identified the drug experience, at least in part, as a regressive yearning for a conflict-free early relationship, we must still raise the question: Is this a maturing and productive procedure? The state, we have said, is a regressive one and a primitive one; and yet sleep, too, is a voluntarily induced regressive state. Biologically it has an anabolic and restorative function. Similarly, periods of regression might be artificially induced in "the service of the ego," as Ernst Kris has said¹³ and there are other regressive states useful in the psychic economy.⁷ The sleep treatment of a quarter century ago was an unsuccessful attempt in this direction. This use for the newer drugs has not been established. It is important, however, as scientists that we have a clear idea of what the state is which we are producing and for what conditions we are prescribing it.

A further question remains: If the feeling of gratification in having achieved a transcendental state is a part of the patient's psychic reality, should we confront him with what we may believe is a more objective reality? This cannot be answered categorically, of course, since such a confrontation might accelerate the progress of a psychiatric disorder, but we regard as axiomatic that it is good for the therapist to know reality, even if it is true that objective reality itself is never completely objective. We believe that if the therapist himself has a subjectively

distorted concept of reality, by so much will he be limited in helping others.

In view of the foregoing, we see the so-called transcendental states not as a progressive, forward looking, or beyond-going experience, but the backward look. It is rather seen as a desire to experience a state of union, not with the Divine Nature or a mystical equivalent, but with the mother of the long-forgotten childhood. Huxley's phrase "downward self-transcendence" suggests a recognition, I believe, that he deals with a regressive process. Since any discussion of mysticism touches on religion and on theology, it should be noted here, that psychiatry does not and cannot speak of what the Divine Nature or God *actually* is. This is beyond the purview of psychiatry. It can only try to understand man's varying *conception* of God.

I would like to mention briefly a recent experiment. A series of subjects were given LSD-25⁴ seven weeks before a series of interviews. There was an intense reaction, even turbulence, during this time. The broader study was reported previously⁴ and I will mention only three subjects in whom the associations to the vivid and dramatic LSD experiences were most obviously connected with regressive mother-child relationships.

Subject No. 1, a woman, under LSD said, "I was hilarious. If I laughed more I would go into complete insanity. I was my own mother, watching myself giving birth to thousands of babies. I was floating in space, great expanses, miles and miles, semi-dark, looking down at myself." During the nine months before LSD, she had been in a depression and had wanted help through recovering childhood memories. She said that the main reason for her wanting therapy following LSD was a desire to understand this fantasy which appeared at that time.

Subject No. 2, a man, under LSD felt "dissolved right through a series of brick and stone walls. I felt as though I were a child. I felt very strange. I was living from the inside out." In the later sessions, he talked of losing his mother at the age of three, and broke into tears. "I have a feeling of tremendous loss. It's getting damn near the point of brutality." He said that he badly needed treatment, not just in the group situation, but privately as well.

Subject No. 3, a man, under LSD was "laughing hysterically; everything seemed hilariously funny." This alternated with periods of depression. During the last sessions he referred to an intense, almost hallucinatory experience of being terribly angry with his mother, an aunt, two wives and his son—all but the son being mother surrogates to him. This was followed by uncontrollable weeping and the words: "I got the bull by the tail. Is this reality or dangerous? Is it going into a smash? I don't seem to mind.

Jane [another subject] says she has spiritual perfection now. Can I hit the levels Huxley describes in his books?"

These illustrations show an unpleasant feeling tone with the regressive content, but the subjects fluctuate between an ecstatic and painful affect. In most, the elevated mood persisted following the experience.

The Seduction of the Scientists

The ideal figure of a scientist is that of the single-purposed individual who indomitably sacrifices all to the one prized goal of truth and reality. Studies of countertransference and communication have shown us, however, how subjective and emotionally influenced the psychiatrist may be.¹⁷ The power of wellbeing, comfort, security and passivity, as Braceland² wrote, affects the scientist also. He too has a longing to discover and savor the modern equivalent of the elixir of tranquility. He perhaps has too much awareness to enjoy it directly, but he can vicariously experience it through identification with his patient. There may be an uncritical eagerness to share in the soul-soothing day-dreams of the writer and poet, in the reflections and meditations of the philosopher, and in the comforting assurance of salvation offered by some religions. There may be an equally intense eagerness for many creative, religious and dedicated people to obtain scientific sanction for their own particular fantasies. There may be a danger, therefore, that the scientific attitude will be alloyed with subjectivity and fantasy, while the creativity of the poet, the artist and the writer will be constricted by the obeisance to pseudo-scientific theory.

Let me quote from Leuba again: "The Yogin as also the user of drugs may win partial or total unconsciousness, and with it isolation and peace but . . . this peace and isolation does not have the exotic significance attributed to . . . them . . . The corresponding self-deception of the user of drugs, and . . . the practices of the Christian mystics, constitute one of the most tragic chapters of human history. To aim so high and to fall so low is in truth a deep tragedy and high comedy."

I would add that the psychopharmacological agents thus far, contrary to some claims, have neither extended nor sharpened consciousness, the principal adaptational tool of man, but during the experience have made it vague, amorphous and primitive. A scientific study of these states of consciousness is important, and should certainly be continued, but the investigator, at least, should maintain his consciousness as sharp and acute as possible. I refer here to the technique used by some advocates of LSD to take the drug simultaneously with the patient,²⁰ presumably to "increase empathy." It may be that thus, in the guise of scientific

investigation, the investigator can without guilt partake of the delights that Huxley wrote of.

The ascent of mankind to higher stages of psychic development has been a difficult and precarious one, marked now by progression, now by regression; and the profusion of tranquilizers, euphorants, and ataractics is a ubiquitous evidence of the instability of our achievements. Science is the path we have chosen to aid in man's growth and development, and mysticism in whatever guise is a contaminant of the scientific attitude.

Department of Psychiatry, The Center for the Health Sciences, UCLA School of Medicine, Los Angeles, California 90024.

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