# Drugs and Mysticism

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The claim has been made that the experience facilitated by psychedelic drugs, such as LSD, psilocybin, and mescaline, can be similar or identical to the experience described by the mystics of all ages, cultures, and religions. This paper will attempt to examine and explain this possibility.

There is a long and continuing history of the religious use of plants that contain psychedelic substances. Scholars such as Osmond (1957b), Schultes (1963), and Wasson (1961) have made valuable contributions to this intriguing field. In some instances, such natural products were ingested by a priest, shaman, or witch doctor to induce a trance for revelatory purposes; sometimes they were taken by groups of people who participated in sacred ceremonies. For example, the dried heads of the peyote cactus, whose chief active ingredient is mescaline, were used by the Aztecs at least as early as 300 B.C. and are currently being employed by over fifty thousand Indians of the Native American Church as a vital part of their religious ceremonies. Both *ololiuqui*, a variety of morning-glory seed, and certain kinds of Mexican mushrooms (called *teonanacatl*, "flesh of the gods") were also used for divinatory and religious purposes by the Aztecs. These practices have continued to the present among remote Indian tribes in the mountains of the state of Oaxaca, in Mexico. Modern psychopharmacological research has shown the active chemicals to be psilocybin in the case of the mushrooms, and several compounds closely related to LSD in the case of ololiuqui. *Amanita muscaria*, the mushroom that has been used for unknown centuries by Siberian shamans to induce religious trances, does not contain psilocybin. The most important psychologically active compound from this mushroom has not yet been isolated, but promising work is in progress. Other naturally occurring plants, which are used by various South American Indian tribes in a religious manner for prophecy, divination, clairvoyance, tribal initiation of male adolescents, or sacred feasts are: cohoba snuff, made from the pulverized seeds of *Piptadenia*; the drink *vinho de Jurumens*, made from the seeds of *Mimosa hostilis*; and the drink *caapi*, made from *Banisteriopsis*. These last three products contain various indolic compounds that are all closely related to psilocybin, both structurally and in their psychic effects (bufotenine, dimethyl-tryptamine, and harmine, respectively). Both LSD and psilocybin contain the indolic ring, and mescaline may be metabolized to an indole in the body.

## An Experimental Examination of the Claim that Psychedelic Drug Experience May Resemble Mystical Experience

Some of the researchers who have experimented with synthesized mescaline, LSD, or psilocybin have remarked upon the similarity between drug-induced and spontaneous mystical experiences because of the frequency with which some of their subjects have used mystical and religious language to describe their experiences. These data interested the author in a careful examination and evaluation of such claims. An empirical study, designed to investigate in a systematic and scientific way the similarities and differences between experiences described by mystics and those facilitated by psychedelic drugs, was undertaken (Pahnke, 1966, 1967). First, a phenomenological typology of the mystical state of consciousness was carefully defined, after a study of the writings of the mystics themselves and of scholars who have tried to characterize mystical experience. [For example, William James (1935) was an invaluable pioneer in this area.] Then, some drug experiences were empirically studied, not by collecting such experiences wherever an interesting or striking one might have been found and analyzed after the fact, but by conducting a double-blind, controlled experiment with subjects whose religious background and experience, as well as personality, had been measured *before* their drug experiences. The preparation of the subjects, the setting under which the drug was administered, and the collection of data about the experience were made as uniform as possible. The experimenter himself devised the experiment, collected the data, and evaluated the results without ever having had a personal experience with any of these drugs.

A nine-category typology of the mystical state of consciousness was defined as a basis for measurement of the phenomena of the psychedelic drug experiences. Among the numerous studies of mysticism, the work of W. T. Stace (1960) was found to be the most helpful guide for the construction of this typology. His conclusion—that in the mystical experience there are certain fundamental characteristics that are universal and not restricted to any particular religion or culture (although particular cultural, historical, or religious conditions may influence both the interpretation and description of these basic phenomena)—was taken as a presupposition. Whether or not the mystical experience is "religious" depends upon one's definition of religion and was not the problem investigated. Our typology defined the universal phenomena of the mystical experience, whether considered "religious" or not.

The nine categories of our phenomenological typology may be summarized as follows:

### Category I: Unity

Unity, the most important characteristic of the mystical experience, is divided into internal and external types, which are different ways of experiencing an undifferentiated unity. The major difference is that the internal type finds unity through an "inner world" *within* the experiencer

while the external type finds unity through the external world outside the experiencer.

The essential elements of *internal unity* are loss of usual sense impressions and loss of self without becoming unconscious. The multiplicity of usual external and internal sense impressions ( including time and space ), and the empirical ego or usual sense of individuality, fade or melt away while consciousness remains. In the most complete experience, this consciousness is a pure awareness beyond empirical content, with no external or internal distinctions. In spite of the loss of sense impressions and dissolution of the usual personal identity or self, the awareness of oneness or unity is still experienced and remembered. One is not unconscious but is rather very much aware of an undifferentiated unity.

*External unity* is perceived outwardly with the physical senses through the external world. A sense of underlying oneness is felt behind the empirical multiplicity. The subject or observer feels that the usual separation between himself and an external object (inanimate or animate) is no longer present in a basic sense; yet the subject still knows that on another level, at the same time, he and the objects are separate. Another way of expressing this same phenomenon is that the essences of objects are experienced intuitively and felt to be the same at the deepest level. The subject feels a sense of oneness with these objects because he "sees" that at the most basic level all are a part of the same undifferentiated unity. The capsule statement "... all is One" is a good summary of external unity. In the most complete experience, a cosmic dimension is felt, so that the experiences feels in a deep sense that he is a part of everything that is.

**Category II: Transcendence of Time and Space**

This category refers to loss of the usual sense of time and space. This means clock time but may also be one's personal sense of his past, present, and future. Transcendence of space means that a person loses his usual orientation as to where he is during the experience in terms of the usual three-dimensional perception of his environment. Experiences of timelessness and spacelessness may also be described as experiences of "eternity" or "infinity."

**Category III: Deeply Felt Positive Mood**

The most universal elements (and, therefore, the ones that are most essential to the definition of this category) are joy, blessedness, and peace. The unique character of these feelings in relation to the mystical experience is the intensity that elevates them to the highest levels of human experience, and they are highly valued by the experiencers. Tears may be associated with any of these elements because of the overpowering nature of the experience. Such feelings may occur either at the peak of the experience or during the "ecstatic afterglow," when the peak has passed but while its effects and memory are still quite vivid and intense. Love may also

be an element of deeply felt positive mood, but it does not have the same universality as joy, blessedness, and peace.

**Category IV: Sense of Sacredness**

This category refers to the sense of sacredness that is evoked by the mystical experience. The sacred is here broadly defined as that which a person feels to be of special value and capable of being profaned. The basic characteristic of sacredness is a non-rational, intuitive, hushed, palpitant response of awe and wonder in the presence of inspiring realities. No religious "beliefs" or traditional theological terminology need necessarily be involved, even though there may be a sense of reverence or a feeling that what is experienced is holy or divine.

**Category V: Objectivity and Reality**

This category has two interrelated elements: ( 1 ) insightful knowledge or illumination felt at an intuitive, non-rational level and gained by direct experience; and (2) the authoritative nature of the experience, or the certainty that such knowledge is truly real, in contrast to the feeling that the experience is a subjective delusion. These two elements are connected, because the knowledge through experience of ultimate reality (in the sense of being able to "know" and "see" what is really *real*) carries its own sense of certainty. The experience of "ultimate" reality is an awareness of another dimension unlike the "ordinary" reality (the reality of usual, everyday consciousness); yet the knowledge of "ultimate" reality is quite real to the experiencer. Such insightful knowledge does not necessarily mean an increase in facts, but rather in intuitive illumination. What becomes "known" (rather than merely intellectually assented to) is intuitively felt to be authoritative, requires no proof at a rational level, and produces an inward feeling of objective truth. The content of this knowledge may be divided into two main types: (a) insights into being and existence in general, and (b) insights into one's personal, finite self.

**Category VI: Paradoxicality**

Accurate descriptions and even rational interpretations of the mystical experience tend to be logically contradictory when strictly analyzed. For example, in the experience of internal unity there is a loss of all empirical content in an *empty* unity which is at the same time *full* and complete. This loss includes the loss of the sense of self and the dissolution of individuality; yet something of the individual entity remains to experience the unity. The "I" both exists and does not exist. Another example is the separateness from, and at the same time unity with, objects in the experience of external unity (essentially a paradoxical transcendence of space).

**Category VII: Alleged Ineffability**

In spite of attempts to relate or write about the mystical experience, mystics insist either that words fail to describe it adequately or that the experience is beyond words. Perhaps the reason is an embarrassment with language because of the paradoxical nature of the essential phenomena.

**Category VIII: Transiency**

Transiency refers to duration, and means the temporary nature of the mystical experience in contrast to the relative permanence of the level of usual experience. There is a transient appearance of the special and unusual levels or dimensions of consciousness as defined by our typology, their eventual disappearance, and a return to the more usual. The characteristic of transiency indicates that the mystical state of consciousness is not sustained indefinitely.

**Category IX: Persisting Positive Changes in Attitude and Behavior**

Because our typology is of a healthful, life-enhancing mysticism, this category describes the positive, lasting effects of the experience and the resulting changes in attitude. These changes are divided into four groups: (1) toward self, (2) toward others, (3) toward life, and (4) toward the mystical experience itself.

(1) Increased integration of personality is the basic inward change in the personal self. Undesirable traits may be faced in such a way that they may be dealt with and finally reduced or eliminated. As a result of personal integration, one's sense of inner authority may be strengthened, and the vigor and dynamic quality of a person's life may be increased. Creativity and greater efficiency of achievement may be released. An inner optimistic tone may result, with a consequent increase in feelings of happiness, joy, and peace. (2) Changes in attitude and behavior toward others include more sensitivity, more tolerance, more real love, and more authenticity as a person by virtue of being more open and more one's true self with others. (3) Changes toward life in a positive direction include philosophy of life, sense of values, sense of meaning and purpose, vocational commitment, need for service to others, and new appreciation of life and the whole of creation. Life may seem richer. The sense of reverence may be increased, and more time may be spent in devotional life and meditation. (4) Positive change in attitude toward the mystical experience itself means that it is regarded as valuable and that what has been learned is thought to be useful. The experience is remembered as a high point, and an attempt is made to recapture it or, if possible, to gain new experiences as a source of growth and strength. The mystical experiences of others are more readily appreciated and understood.

The purpose of the experiment in which psilocybin was administered in a religious context was to gather empirical data about the state of consciousness experienced. In a private chapel on Good Friday, twenty

Christian theological students, ten of whom had been given psilocybin one and one half hours earlier, listened over loudspeakers to a two-and-onehalf-hour religious service which was in actual progress in another part of the building and which consisted of organ music, four solos, readings, prayers, and personal meditation. The assumption was made that the condition most conducive to a mystical experience should be an atmosphere broadly comparable to that achieved by tribes who actually use natural psychedelic substances in religious ceremonies. The particular content and procedure of the ceremony had to be applicable (i.e., familiar and meaningful) to the participants. Attitude toward the experience, both before and during, was taken into serious consideration in the experimental design. Preparation was meant to maximize positive expectation, trust, confidence, and reduction of fear. The setting was planned to utilize this preparation through group support and rapport; through friendship and an open, trusting atmosphere; and through prior knowledge of the procedure of the experiment in order to eliminate, if possible, feelings of manipulation that might arise.

In the weeks before the experiment, each subject participated in five hours of various preparation and screening procedures, which included psychological tests, medical history, physical examination, questionnaire evaluation of previous religious experience, intensive interview, and group interaction. The twenty subjects were graduate-student volunteers, all of whom were from middle-class Protestant backgrounds and from one denominational seminary in the free-church tradition. None of the subjects had taken psilocybin or related substances before this experiment. The volunteers were divided into five groups of four students each on the basis of compatibility and friendship. Two leaders, who knew from past experience the positive and negative possibilities of the psilocybin reaction, met with their groups to encourage trust, confidence, group support, and fear reduction. The method of reaction to the experience was emphasized (i.e., to relax and co-operate with, rather than to fight against, the effects of the drug). Throughout the preparation, an effort was made to avoid suggesting the characteristics of the typology of mysticism. The leaders were not familiar with the typology that had been devised.

Double-blind technique was employed in the experiment, so that neither the experimenter nor any of the participants (leaders or subjects) knew the specific contents of the capsules, which were identical in appearance. Half of the subjects and one of the leaders in each group received psilocybin (thirty milligrams for each of the ten experimental subjects and fifteen milligrams each for five of the leaders). Without prior knowledge of the drug used, or of its effects, the remaining ten subjects and the other five leaders each received two hundred milligrams of nicotinic acid, a vitamin that causes transient feelings of warmth and tingling of the skin, in order to maximize suggestion for the control group.

Data were collected during the experiment and at various times up to six months afterward. On the experimental day, tape recordings were made both of individual reactions immediately after the religious service and of the group discussions that followed. Each subject wrote an account of his

experience as soon after the experiment as was convenient. Within a week all subjects had completed a 147-item questionnaire which had been designed to measure the various phenomena of the typology of mysticism on a qualitative, numerical scale. The results of this questionnaire were used as a basis for a one-and-one-half-hour, tape-recorded interview which immediately followed. Six months later each subject was interviewed again after completion of a follow-up questionnaire in three parts, with a similar scale. Part I was open ended; the participant was asked to list any changes that he felt were a result of his Good Friday experience and to rate the degree of benefit or harm of each change. Part II (fifty-two items) was a condensed and somewhat more explicit repetition of items from the post-drug questionnaire. Part III (ninety-three items) was designed to measure both positive and negative attitudinal and behavioral changes that had lasted for six months and were due to the experience. The individual descriptive accounts and Part I of the follow-up questionnaire were content-analyzed with a qualitative, numerical scale by judges who were independent of the experiment and who knew only that they were to analyze twenty accounts written by persons who had attended a religious service.

Prior to the experiment, the twenty subjects had been matched in ten pairs on the basis of data from the pre-drug questionnaires, interviews, and psychological tests. Past religious experience, religious background, and general psychological make-up were used for the pairings, in that order of importance. The experiment was designed so that by random distribution one subject from each pair received psilocybin and one received the control substance, nicotinic acid. This division into an experimental and a control group was for the purpose of statistical evaluation of the scores from each of the three methods of measurement that used a numerical scale: the post-drug questionnaire, the follow-up questionnaire, and the content analysis of the written accounts.

A summary of percentage scores and significance levels reached by the ten experimentals and ten controls, for each category or subcategory of the typology of mysticism, is presented in Table I. The score from each of the three methods of measurement was calculated as the percentage of the maximum possible score if the top of the rating scale for each item had been scored. The percentages from each method of measurement were then averaged together. A comparison of the scores of the experimental and control subject in each pair was used to calculate the significance level of the differences observed by means of the non-parametric Sign Test. As can be seen from Table I, for the combined scores from the three methods of measurement, p was less than.020 in all categories except deeply felt positive mood (love) and persisting positive changes in attitude and behavior toward the experience, where p was still less than .055.
(TABLE I)

Although this evidence indicates that the experimentals as a group achieved to a statistically significant degree a higher score in each of the

nine categories than did the controls, the degree of completeness or intensity must be examined.

In terms of our typology of mysticism, ideally the most "complete" mystical experience should have demonstrated the phenomena of all the categories in a maximal way. The evidence (particularly from the content analysis and also supported by impressions from the interviews) showed that such perfect completeness in all categories was not experienced by all the subjects in the experimental group. In the data, the various categories and subcategories can be divided into three groups in regard to the degree of intensity or completeness, as shown in Table II. Criteria were the percentage levels and the consistency among different methods of measurement. The closest approximation to a complete and intense degree of experience was found for the categories of internal unity, transcendence of time and space, transiency, paradoxicality, and persisting positive changes in attitude and behavior toward self and life. The evidence indicated that the second group had almost, but not quite, the same degree of completeness or intensity as the first group. The second group consisted of external unity, objectivity and reality, joy, and alleged ineffability. There was a relatively greater lack of completeness for sense of sacredness, love, and persisting positive changes in attitude and behavior toward others and toward the experience. Each of these last eight categories and sub-categories was termed incomplete to a greater or lesser degree for the experimentals, but was definitely present to some extent when compared with the controls. When analyzed most rigorously and measured against all possible categories of the typology of mysticism, the experience of the experimental subjects was considered incomplete in this strictest sense. Usually such incompleteness was demonstrated by results of the content analyses.

(TABLE II)

The control subjects did not experience many phenomena of the mystical typology, and even then only to a low degree of completeness. The phenomena for which the scores of the controls were closest to (although still always less than) the experimentals were: blessedness and peace, sense of sacredness, love, and persisting positive changes in attitude and behavior toward others and toward the experience.

The design of the experiment suggested an explanation for the fact that the control subjects should have experienced any phenomena at all. The meaningful religious setting of the experiment would have been expected to encourage a response of blessedness, peace, and sacredness. In the case of love and persisting changes toward others and toward the experience, observation by the controls of the profound experience of the experimentals and interaction between the two groups on an interpersonal level appeared, from both post-experimental interviews, to have been the main basis for the controls' experience of these phenomena.

The experience of the experimental subjects was certainly more like

mystical experience than that of the controls, who had the same expectation and suggestion from the preparation and setting. The most striking difference between the experimentals and the controls was the ingestion of thirty milligrams of psilocybin, which it was concluded was the facilitating agent responsible for the difference in phenomena experienced.

After an admittedly short follow-up period of only six months, life-enhancing and enriching effects similar to some of those claimed by mystics were shown by the higher scores of the experimental subjects when compared to the controls. In addition, after four hours of follow-up interviews with each subject, the experimenter was left with the impression that the experience had made a profound impact (especially in terms of religious feeling and thinking) on the lives of eight out of ten of the subjects who had been given psilocybin. Although the psilocybin experience was unique and different from the "ordinary" reality of their everyday lives, these subjects felt that this experience had motivated them to appreciate more deeply the meaning of their lives, to gain more depth and authenticity in ordinary living, and to rethink their philosophies of life and values. The data did not suggest that any "ultimate" reality encountered had made "ordinary" reality no longer important or meaningful. The fact that the experience took place in the context of a religious service, with the use of symbols that were familiar and meaningful to the participants, appeared to provide a useful framework within which to derive meaning and integration from the experience, both at the time and later.

The relationship and relative importance of psychological preparation, setting, and drug were important questions raised by our results. A meaningful religious preparation, expectation, and environment appeared to be conducive to positive drug experiences, although the precise qualitative and quantitative role of each factor was not determined. For example, everything possible was done to maximize suggestion, but suggestion alone cannot account for the results, because of the different experience of the control group. The hypothesis that suggestibility was heightened by psilocybin could not be ruled out on the basis of our experiment. An effort was made to avoid suggesting the phenomena of the typology of mysticism, and the service itself made no such direct suggestion.

**Implications for the Psychology of Religion**

The results of our experiment would indicate that psilocybin (and LSD and mescaline, by analogy) are important tools for the study of the mystical state of consciousness. Experiences previously possible for only a small minority of people, and difficult to study because of their unpredictability and rarity, are now reproducible under suitable conditions. The mystical experience has been called by many names suggestive of areas that are paranormal and not usually considered easily available for investigation (e.g., an experience of transcendence, ecstasy, conversion, or cosmic consciousness); but this is a realm of human experience that should not be rejected as outside the realm of serious scientific study, especially if it can

be shown that a practical benefit can result. Our data would suggest that such an overwhelming experience, in which a person existentially encounters basic values such as the meaning of his life (past, present, and future), deep and meaningful interpersonal relationships, and insight into the possibility of personal behavior change, can possibly be therapeutic if approached and worked with in a sensitive and adequate way.

Possibilities for further research with these drugs in the psychology of religion can be divided into two different kinds in relation to the aim: (1) theoretical understanding of the phenomena and psychology of mysticism, and (2) experimental investigation of possible social application in a religious context.

The first, or theoretical, kind of research would be to approach the mystical state of consciousness as closely as possible under controlled experimental conditions and to measure the effect of variables such as the dose of the drug, the preparation and personality of the subject, the setting of the experiment, and the expectation of the experimenter. The work described above was a first step in the measurement of these variables, but more research is needed. The results should be proved to be reproducible by the same and by different experimenters under similar conditions. Such work could lead to a better understanding of mysticism from physiological, biochemical, psychological, and therapeutic perspectives.

Several experimental approaches can be envisioned for the second kind of research—to determine the best method for useful application in a religious context. One suggestion would be the establishment of a research center where carefully controlled drug experiments could be done by a trained research staff which would consist of psychiatrists, clinical psychologists, and professional religious personnel. Subjects, ideally, would spend at least a week at the center to facilitate thorough screening, preparation, and observation of their reactions, both during and after drug experiments. Another suggestion would be the study of the effect of mystical experience on small natural groups of from four to six people who would meet periodically, both prior to and after a drug experience, for serious personal and religious discussion, study, and worship. The reactions of a varied range of subjects with different interests could be studied, but perhaps a good place to start would be with persons professionally interested in religion, such as ministers, priests, rabbis, theologians, and psychologists of religion.

Such research may have important implications for religion. The universal and basic human experience that we have called mystical is recorded from all cultures and ages of human history, but mysticism has never been adequately studied and understood from physiological, biochemical, sociological, psychological, and theological perspectives.

Perhaps there is more of a biochemical basis to such "natural" experiences than has been previously supposed. Certainly many ascetics who have had mystical experiences have engaged in such practices as

breathing and postural exercises, sleep deprivation, fasting, flagellation with subsequent infection, sustained meditation, and sensory deprivation in caves or monastic cells. All these techniques have an effect on body chemistry. There is a definite interplay between physiological and psychological processes in the human being. Some of the indolic substances in the body do not differ greatly from the psychedelic drugs.

Many persons concerned with religion are disturbed by drug-facilitated mystical experiences because of their apparent ease of production, with the implication that they are "unearned" and therefore "undeserved." Perhaps the Puritan and Calvinistic element of our Western culture—especially in the United States, where most of the controversy about psychedelic drugs has centered—may be a factor in this uneasiness. Although a drug experience might seem unearned when compared with the rigorous discipline that many mystics describe as necessary, our evidence has suggested that careful preparation and expectation play an important part, not only in the type of experience attained but in later fruits for life. Positive mystical experience with psychedelic drugs is by no means automatic. It would seem that the "drug effect" is a delicate combination of psychological set and setting in which the drug itself is the trigger or facilitating agent—i.e., in which the drug is a *necessary* but not *sufficient* condition. Perhaps the hardest "work" comes after the experience, which in itself may only provide the motivation for future efforts to integrate and appreciate what has been learned. Unless such an experience is integrated into the ongoing life of the individual, only a memory remains rather than the growth of an unfolding renewal process which may be awakened by the mystical experience. If the person has a religious framework and discipline within which to work, the integrative process is encouraged and stimulated. Many persons may not need the drug-facilitated mystical experience, but there are others who would never be aware of the undeveloped potentials within themselves, or be inspired to work in this direction, without such an experience. "Gratuitous grace" is an appropriate theological term, because the psychedelic mystical experience can lead to a profound sense of inspiration, reverential awe, and humility, perhaps partially as a result of the realization that the experience is a gift and not particularly earned or deserved.

Mysticism and inner experience have been stressed much more by Eastern religions than by Western. Perhaps Western culture is as far off balance in the opposite direction—with its manipulation of the external world, as exemplified by the emphasis on material wealth, control of nature, and admiration of science. Mysticism has been accused of fostering escapism from the problems of society, indifference to social conditions, and disinterest in social change. While the possibility of such excesses must always be remembered, our study has suggested the beneficial potential of mystical experience in stimulating the ability to feel and experience deeply and genuinely with the full harmony of both emotion and intellect. Such wholeness may have been neglected in modern Western society.

The participants in our experiment who were given psilocybin found the religious service more meaningful, both at the time and later, than did the

control subjects. This finding raises the possibility that psychedelic drug experiences in a religious setting may be able to illuminate the dynamics and significance of worship. Increased understanding of the psychological mechanism involved might lead to more-meaningful worship experiences for those who have not had the drug experience. The analogy with the efficacy of the sacraments is one example of what would have to be considered for a better psychological understanding of what goes on during worship. Such considerations raise the question of the place of the emotional factor, compared to the cognitive, in religious worship. An even more basic question is the validity of religious experience of the mystical type in terms of religious truth. Reactions to such religious implications will vary with theological position and presuppositions, but one value of our study can be to stimulate thoughtful examination of the problems.

Although our experimental results indicated predominantly positive and beneficial subjective effects, possible dangers must not be underestimated and should be thoroughly evaluated by specific research designed to discover the causes and methods of prevention of physical or psychological harm, both short-term and long-term. While physiological addiction has not been reported with psychedelic substances, psychological dependence might be expected if the experience were continually repeated. The intense subjective pleasure and enjoyment of the experience for its own sake could lead to escapism and withdrawal from the world. An experience which is capable of changing motivation and values might cut the nerve of achievement. Widespread apathy toward productive work and accomplishment could cripple a society. Another possible danger might be suicide or prolonged psychosis in very unstable or depressed individuals who are not ready for the intense emotional discharge. If it can be determined that any of these forms of harm occur in certain types of individuals, research could be directed toward the development of pretest methods to screen out such persons. Our evidence would suggest that research on conditions and methods of administration of the drugs might minimize the chance of harmful reactions. Spectacular immediate advance must be sacrificed for ultimate progress by careful, yet daring and imaginative, research under adequate medical supervision.

The ethical implications also cannot be ignored. Any research that uses human volunteers must examine its motives and methods to make certain that human beings are not being manipulated like objects for purposes they do not understand or share. But in research with powerful mental chemicals that may influence the most cherished human functions and values, the ethical problem is even more acute. The mystical experience, historically, has filled man with wondrous awe and has been able to change his style of life and values; but it must not be assumed that greater control of such powerful phenomena will automatically result in wise and constructive use. Potential abuse is just as likely. Those who undertake such research carry a heavy responsibility.

This is not to say that research should be stopped because of the fear of these various risks in an extremely complex and challenging area that has

great promise for the psychology of religion. But while research is progressing on the theoretical or primary level and before projects for testing useful social applications in a religious context become widespread, serious and thoughtful examination of the sociological, ethical, and theological implications is needed without delay.

Not the least of these implications is the fear that research that probes the psyche of man and involves his spiritual values may be a sacrilegious transgression by science. If the exploration of certain phenomena should be prohibited, should the mystical experiences made possible by psychedelic drugs be one of the taboo areas? Such restrictions raise several relevant questions: Who is wise enough to decide in advance that such research will cause more harm than good? If such restrictions are applied, where will they end, and will they not impede knowledge of unforeseen possibilities? This attitude on the part of religion is not new. Galileo and Servetus encountered it hundreds of years ago. The issue should not be whether or not to undertake such research, but rather how to do so in a way that sensitively takes into consideration the contribution, significance, and values of religion. A better scientific understanding of the mechanisms and application of mysticism has the potential for a greater appreciation and respect for heretofore rarely explored areas of human consciousness. If these areas have relevance for man's spiritual life, this should be a cause for rejoicing, not alarm. If the values nurtured by religion are fundamental for an understanding of the nature of man, then careful and sensitive scientific research into the experiential side of man's existence has the potential for illumination of these values. The importance of such research should be emphasized, especially because of its possible significance for religion and theology.

At present we are a long way from legitimate social use of such drugs in our society. We do not yet have nearly enough adequate knowledge of the long-term physiological or psychological effects. It is true that thus far no organ or tissue damage has been reported in the usual dosage range, and physiological addiction has not occurred. But as in the case of any new drug, deleterious side effects sometimes do not become apparent until years after a drug has been introduced. The social suffering caused by the misuse of alcohol is a major public health problem throughout the Western world. We certainly need to hesitate before introducing a new agent, much more powerful than alcohol and perhaps with a potential for the development of subtle psychological dependence. And yet, paradoxically, these very drugs may hold a promise for the treatment of chronic alcoholism by way of the psychedelic mystical experience (Kurland, Unger, and Shaffer, 1957; Unger et. al., 1966; Unger, 1965). Such questions can be satisfactorily answered only by thorough scientific research of the possibilities and by sober evaluation of the results.

Many unknown conscious and unconscious factors operate in the mystical experience. Much investigation is needed in this area, and drugs like psilocybin can be a powerful tool. Experimental facilitation of mystical experiences under controlled conditions can be an important method of

approach to a better understanding of mysticism. Better understanding can lead to appreciation of the role and place of such experiences in the history and practice of religion.

If parapsychology is concerned in an interdisciplinary way with the question of the potentials of human experience, then the controlled exploration of experimental mysticism, facilitated by psychedelic drugs, is an important parapsychological research area, where psychopharmacology, psychiatry, psychology, and theology can meet to mutual advantage.

**TABLE I**

SUMMARY OF PERCENTAGE SCORES AND SIGNIFICANCE LEVELS REACHED BY THE EXPERIMENTAL VERSUS THE CONTROL GROUP FOR CATEGORIES MEASURING THE TYPOLOGY OF MYSTICAL EXPERIENCE

| | % of Maximum Possible Score for 10 Ss | | |
|---|---|---|---|
| Category | Exp. | Cont. | P* |
| 1. Unity | 62 | 7 | .001 |
| A. Internal | 70 | 8 | .001 |
| B. External | 38 | 2 | .008 |
| 2. Transcendence of time and space | 84 | 6 | .001 |
| 3. Deeply felt positive mood | 57 | 23 | .020 |
| A. Joy, blessedness and peace | 51 | 13 | .020 |
| B. Love | 57 | 33 | .055 |
| 4. Sacredness | 53 | 28 | .020 |
| 5. Objectivity and reality | 63 | 18 | .011 |
| 6. Paradoxicality | 61 | 13 | .001 |
| 7. Alleged ineffability | 66 | 18 | .001 |
| 8. Transiency | 79 | 8 | .001 |
| 9. Persisting positive changes in attitude and behavior | 51 | 8 | .001 |
| A. Toward self | 57 | 3 | .001 |
| B. Toward others | 40 | 20 | .002 |
| C. Toward life | 54 | 6 | .011 |
| D. Toward the experience | 57 | 31 | .055 |

*Probability that the difference between experimental and control scores was due to chance.

**TABLE II**

RELATIVE COMPLETENESS* OF VARIOUS CATEGORIES IN WHICH THERE WAS A STATISTICALLY SIGNIFICANT DIFFERENCE BETWEEN EXPERIMENTAL AND CONTROL GROUPS

| (1) | (2) | (3) |
|---|---|---|
| Closest approximation to the most complete and intense expression | Almost, but not quite, as complete or intense as (1) | Least complete or intense, though still a definite difference from the control group |
| Internal Unity | External unity | Sense of sacredness |
| Transcendence of time and space | Objectivity and reality | Deeply felt positive mood (love) |
| Transiency | Alleged ineffability | Persisting positive changes in attitude and behavior toward others and the experience |
| Paradoxicality | Deeply felt positive mood (joy, blessedness, and peace) | |
| Persisting positive changes in attitude and behavior toward self and life | | |

* Based on qualitative score levels and agreement among the three methods of measurement in comparing the scores of the experimental versus the control group.