

## Chapter VIII

### SUGGESTIONS FOR FURTHER RESEARCH

### AND IMPLICATIONS FOR THE FUTURE

This dissertation has demonstrated the potential of at least psilocybin, if not LSD and mescaline by analogy, as a tool for the study of the mystical state of consciousness. A program of future research with these chemicals in the psychology of religion can be divided into two different kinds, depending on the aim: (1) theoretical understanding and (2) social application in a religious context.

The first kind would be primarily theoretical and would have as its aim a more basic understanding of the psychology and phenomenology of mysticism. The method would be to approach the mystical state of consciousness as closely as possible under experimental conditions and to measure the effect of variables. This thesis has been a start toward this approach, but much work needs to be done in this area for a better understanding of mysticism from a physiological, biochemical, and psychological perspective.

Obviously, the first step in such a program would be to reproduce the same experiment with a different group

of individuals who would be similar to the subjects already tested to check the repeatability and reliability of the results with the same design. This work should be done both by the same experimenter and by other independent experimenters with as much the same set and setting for the subjects as possible. The service itself has been taped and could be repeated exactly. The same experimental protocol, techniques for matching pairs, questionnaires, and tests could be used. Repetition of our experiment by different workers with other subjects would add to what has already been learned about the most effective way to design and run such experiments. A comparison of these data would further enlarge our understanding of the mystical state of consciousness.

From the work reported above certain interesting modifications can be suggested. If the effect of nicotinic acid plus psilocybin were first determined to be synergistic, antagonistic, or neutral, such a combination in the proper strength could be given to the experimentals while the controls received only nicotinic acid. A better double-blind control would be obtained from such a procedure because everyone would have the same initial reaction. To insure that bias from communication and observation of others

would be reduced, the protocol could also be changed so that neither during nor after the experiment each participant would discuss his experience with the others. Subjects in such a case should not know each other outside the experiment, but this would detract considerably from the security and friendliness of the setting. Another perhaps more practical modification in design would be to administer the psilocybin and control substance at the beginning of the chapel service after an initial quiet period of personal meditation (perhaps for 15 to 30 minutes). The set and setting during the important time while the drug was taking effect would be that of serious worship in an actual service and would preserve unbroken a continuity which was disturbed when the groups moved into the chapel. With this change in the timing of the drug administration, either a longer service would have to be used, or when the service was over some type of supervised group interaction and exploration of interpersonal relations would have to be planned for the remaining time during which the psilocybin reaction would still be present (i.e., for two to three hours).

Preparation could be changed so that greater uniformity of expectancy would be achieved. A selected and uniform

bibliography of mystical literature could be read and discussed by the groups to gain some familiarity with the kind of experience to be anticipated and to decrease the fear which sometimes occurs from a new and unexpected situation. This would provide a more uniform individual preparation. Also more meetings of the members of the groups with their leaders would increase rapport, mutual support, and sense of security. The practice of group meditation and worship would also aid this sense of togetherness and might make the experimental situation more natural. Experiments could be run with total fasting in advance for varying periods as part of the preparation. This would certainly insure more uniformity of the time of onset of the drug effects. Other ascetic practices such as sensory deprivation or sexual abstinence could be investigated for their influences. Another preparation factor to be tested would be the effect of being in a "state of grace" (i.e., prior absolution and restitution for any "sins" and guilt therefrom). The meaningfulness of the religious service for the leaders is another important variable. Their attitude and feeling might well add or detract from the sense of sacredness and seriousness which the subjects would feel in the experimental situation.

With adequate and appropriate pre-tests and enough subjects a correlation could be attempted between prior personality structure or religious experience and the types of drug reactions, both positive and negative. There was some very tentative suggestion in a few of our subjects that persons with a "mystical" temperament (i.e., those who already have experienced some mystical phenomena) are more likely to experience a degree of the mystical state of consciousness with the aid of psilocybin. Such an hypothesis could be tested by rigorous screening for subjects with such a temperament by interviews, psychological tests, and questionnaires. A double-blind study with the same experimental procedure as was used above could be run using only such screened subjects. Another method of screening would be to measure a prior, non-drug response to the taped chapel service as measured by questionnaire and interview. Only those subjects to whom such a service was meaningful and moving would be used in the drug experiment when the same service would be repeated at another time.

The success in producing states of consciousness which resemble, although incompletely, the mystical typology in prepared subjects with a single, initial dose of psilocybin encourages the trial of multiple sessions. The sheer unique-

ness of the drug experience is overwhelming even to a well-prepared subject and may detract from his ability to let himself go completely and surrender to the experience. The hypothesis that familiarity with the experience positively reinforces set and setting and increases the likelihood of positive experience and mystical phenomena could be tested by repeating the psilocybin experience at regular intervals over a period of time (e.g., two, three, or four sessions in a year).<sup>1</sup> After the first session, single-blind controlled studies would be more practical than double-blind because of the very uniqueness of the experience. A matched control group could be run through repeated sessions at different times from the experimentals with as identical a set and setting as possible. Testing by interview and questionnaire could be done after each session to determine whether any new phenomenology had occurred which more closely resembled the mystical typology.

The questionnaires which were designed for gathering the data for this dissertation could be refined. As has been suggested above certain items did not contribute much to their categories or were not worded well enough to

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<sup>1</sup>Chwelow and Blewett found this to be the case with LSD (Handbook, pp. 66-67).

measure what was intended. What has been learned about the effectiveness of the questionnaires as a measuring tool for the study of mysticism could be incorporated into a revised version. For multiple sessions a questionnaire would be needed which could show an increase each time in a particular item if it occurred. During the first session, for example, the participant might rate certainty of the encounter with ultimate reality as "5" on a 0-5 scale if this were the strongest experience he had ever had or had imagined possible up to that time. In his next session, however, he might experience an even more "ultimate" reality. Therefore, although the same questionnaire might be used, a 0-7 scale would provide the opportunity to indicate the same strength as previously ("5"), a little stronger ("6"), or very much stronger ("7"). For the third session a 0-9 scale could be used, etc. New types of questionnaires could also be tried. Instead of directly asking about categories by means of individual scattered items, each category could be explained in an instruction manual similar to that written for the judges. Then each category could be scored as a whole or by a cluster of the most representative items for that category. Another approach might be to quote short descriptions which are good examples

of each category from the writings of the mystics and ask the participant to compare his drug experience with these examples on a rating scale of degree of similarity.

Another modification in any on-going research in this field would be longer and more thorough follow-up studies. The subjects could be checked periodically for one to three years to assess possible psychological benefit or harm. For accurate assessment of persisting changes in attitude and behavior, not only the person's own subjective judgment but also those of other persons close to him, such as spouse or intimate friend, could be measured. Actual changes in behavior could be listed and tabulated.

If the conclusions of this dissertation are first confirmed and clarified by the additional experiments suggested above, other experiments could be designed to test more precisely the effect of set and setting on the relative frequency of occurrence of specific mystical elements in the drug experience. For example, if a relatively homogeneous sample of subjects were divided into four equal groups (two groups of experimentals and two of controls), four sessions could be run for each group in two different settings by two different groups of investigators in a Latin-square design. The "religious" setting could be in a chapel as described

above by investigators convinced that the drug experience was positive and even potentially "mystical". The other setting would be in a psychiatric hospital by investigators convinced that the experience was negative and merely a "model psychosis." The same pre-drug tests, questionnaires, and interviews would be given to each group, but the initial set and setting in two groups would be "religious" and in two, "psychiatric."

Each group would have two drug sessions and two control sessions--one of each in each of the two settings. The same questionnaire which would have both "positive" and "negative" responses would be given to each group after each session after an account had been written by each person. It would be interesting to determine whether or not the initial set and setting had a controlling effect on both the initial and subsequent experiences in different and the same settings. Such a series of experiments might also shed light on the whole problem of the relationship between psychosis and intense mystical states of consciousness. All the accounts could be content analyzed for both "mystical" and "psychotic" elements.

The study of the basic phenomenology of mysticism in the drug experiences of persons already interested in

religion would be only the first step. The claim of some investigators<sup>2</sup> that mystical phenomena occur even in persons with no interest in religion could be checked by administering psilocybin in a setting free from any religious suggestion. Of course, the basic setting factor of trust, confidence, and friendliness should be maintained.

Let us turn now to the second kind of research which would involve experimental investigation of possible social application in a religious context. Such experiments would be undertaken only after adequate evidence had been accumulated by means of the first or theoretical approach to substantiate the findings and suggestions of our research. If it were confirmed, for example, that personally and socially useful changes in behavior are produced with a meaningful religious setting and preparation, experiments could be designed to develop the best methods and conditions of administration to provide the maximal chance for beneficial effects to occur without danger.

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<sup>2</sup>Leary and Clark, op. cit., pp. 252-253. See also Sherwood, Stolaroff, and Harman, J. Neuropsychiatry, Vol. IV, No. 2, pp. 76-79. The loose use of the terms "religious experience" or "classic mystic conversion reaction:" adds confusion and misunderstanding unless these terms are carefully defined. See our discussion above on this point, pp. 24-27.

One such experiment could be to establish a retreat center with a trained, permanent staff consisting of psychiatrists, clinical psychologists, and ministers. A uniform technique of procedure and testing would have to be devised so that the results over a period of time could be compared. Small groups, preferably already in rapport, of laymen or ministers to whom such a setting would be meaningful would spend from five to seven days at the center. Screening by means of physical examination and history, psychological testing, preparation of an autobiography, and preliminary interviews, would be done before the group came to the retreat center. Several leaders (staff personnel) would join each group as integral members for the duration of the retreat. At least the first three days would be spent in preparation for the drug session and would include readings of selected materials which had been found helpful to others, group discussions with the staff, worship and meditation alone and with the group, meals and recreation as a group, and individual interviews with the staff. The emphasis would be on building group rapport, a spirit of trust and friendship, and serious expectation of a meaningful experience. The techniques which have proved successful in group dynamics work could be used to facilitate

sharing of past experiences between group members and to build the interpersonal honesty and solidarity of the group. After this period of preparation, one whole day would be set aside for the drug session in an appropriate religious setting. The staff members with whom the groups had been working would be in charge with assistance if needed from other staff members who would be standing by. Group discussion of the experience would be an important part of the retreat and would continue for at least two days after the session while data was gathered by the staff by means of written accounts, questionnaires, and interviews. Follow-up meetings of the group could be arranged, and perhaps a repeat of the retreat could be made after a year.

Another experiment along a similar line would be the formation of small natural groups of 4-6 people who would meet periodically for serious religious and personal discussions in depth, Bible study, and worship in the form of prayer and meditation. After a period of several months in which rapport, mutual trust, and a bond of fellowship were being established, a drug session could be planned in collaboration with a psychiatrist and minister who both had been trained in the use of psychedelic substances. Pre-testing could be done at one of the meetings. A whole day

would have to be set aside for the session with the psychiatrist and minister in attendance to administer the drugs, run the session, and collect data in such a way as to add to positive set and setting. Post-session discussion, meetings, and collection of follow-up data would also be important here. The effects of multiple drug sessions could also be studied.

In both of these proposals the most practical kind of controls could be matched groups who underwent the same retreat or cell-group experience without the drug over the same time interval with the same staff at the same place, but at a different time from the experimentals. Once the effectiveness of the method was proved in terms of personal and social usefulness, the most valuable data would consist of comparisons between groups in which different techniques were tried to determine the best method to use for an experience of maximal benefit.

It must, however, be emphasized that much more research needs to be done at the theoretical level before such pilot research projects for social application should be attempted. Such work must be done carefully and cautiously both because of the social resistance to be overcome and because of potential dangers involved.

In our society the use of drugs for any reason other than for a medical indication in the treatment of some specific illness is suspect. Fear of addiction or physical harm is the intuitive association, but beyond this legitimate fear perhaps the American Puritan heritage with its disapproval of pleasure or enjoyment for its own sake, especially if unearned by hard work, may be a factor. Also the relative ease with which the phenomena of the mystical state of consciousness were induced in our experimental subjects with the aid of psilocybin might seem undeserved when compared to the rigorous discipline which many mystics describe as necessary. Although a drug experience might seem "unearned", our evidence has suggested that preparation and expectation play an important part, not only in the type of experience attained, but in later fruits for life. Perhaps the hardest "work" comes after the experience which itself may only provide the motivation for future efforts to integrate and appreciate what has been learned. The best way to overcome social resistance is to demonstrate the value and safety by careful and responsible investigation.

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 prolonged psychosis or suicide in very unstable or depressed individuals who were 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 pre-test 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 supervision.

The ethical implications also cannot be ignored. Any research which uses human volunteers must examine its motives and methods to make certain that human beings are not being manipulated like objects for purposes which they do not understand or share. But in research with powerful mental chemicals which 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. A detailed examination and discussion of all the ethical implications would require another thesis; such considerations must be constantly kept in mind as a reminder of the more than normal caution required.

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 with 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 application in a religious context become widespread, serious and thoughtful examination of the sociological, ethical, and theological implications is needed without delay.